The Politician and the Judge: Accountability in Government

By Eric Maskin and Jean Tirole*

We build a simple model to capture the major virtues and drawbacks of making public officials accountable (*i.e., subjecting them to reelection*)*: On the one hand, accountability allows the public to screen and discipline their officials; on the other, it may induce those officials to pander to public opinion and put too little weight on minority welfare. We study when decision-making powers should be allocated to the public directly* (*direct democracy*)*, to accountable officials* (*called "politicians"*)*, or to nonaccountable officials* (*called "judges"*)*.* (*JEL* H1, H7, K4)

The premise behind democracy is that public decisions should reflect the will of the people. But in most democracies, comparatively few decisions are made *directly* by the public.[1] More often, the power to decide is delegated to *representatives.* And there is a good reason for this delegation: representatives are usually expected to do a better job.[2] As specialists in public decision-making, they are more likely than the average citizen to have the experience, judgment, and information to decide wisely.[3] In any case, they have greater incentive than the citizen to *try* to do so. After all, in any large society, a lone citizen will have strong temptation to free-ride, since her chance of actually affecting policy is almost negligible.[4]

Another potential advantage of representative government is that it reduces the risk of "tyranny by the majority." Noting the dangers of direct democracy,[5] Madison (1787) writes: "It is of great importance ... to guard one part of the society against the injustice of the other part. Different interests necessarily exist in different classes of citizens. If a majority be united by a

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[1] Ballot referendums constitute the largest class of decisions made through direct democracy, but even in the United States and Switzerland, where they are especially popular, they touch on only a small fraction of public policy issues.

[2] See, however, the sympathetic 14-page survey on direct democracy in *The Economist* (December 21, 1996). Many have argued that once the digital divide is eliminated, e-voting will enhance the appeal of referendums.

[3] The view that governments are better informed than citizens is emphasized in James Madison (1787) and Abbé Siéyès (1789) (see also the introduction to Bernard Manin, 1997).

[4] Joseph Schumpeter (1942) puts it in characteristically acerbic fashion: "The average citizen expends less disciplined effort on mastering a political problem than he expends on a game of bridge."

[5] Summarizing the case against direct democracy, David Butler and Austin Ranney (1994, pp. 17–18) write:

> The main arguments against holding referendums in representative democracies include: (1) ordinary citizens have neither the analytical skills nor the information to make wise decisions; (2) decisions by elected officials involve weighing the intensity of preferences and melding the legitimate interests of many groups into policies that will give all groups something of what they want; (3) decisions made by representatives are more likely to protect the rights of minorities; and (4) by allowing elected officials to be bypassed and by encouraging officials to evade divisive issues by passing them on to the voters, referendums weaken the prestige and authority of representatives and representative government.

We have already touched on points (1) and (3), and these will figure prominently in our analysis.

common interest, the rights of the minority will be insecure."

But if representatives decide for the public, what induces them to act in the public interest? In this paper we focus on two motivations in particular.

First, we suppose that an official wishes to leave a *legacy*, i.e., she wants to be remembered for great things. Indeed, in our setup, it is not enough for the official that great things be done; *she* wants to be the one who does them (although we allow for the possibility that her conception of what is "great" may differ from that of the average citizen, that is, she may be *noncongruent* with society).[6]

But the desire to use power to achieve certain ends is not the only motive we ascribe to the official. We also assume that she values being in office for its own sake, perhaps because she enjoys the perquisites that come with the job, perhaps because she simply has a taste for wielding influence.[7]

The public can harness these two motives by making the official *accountable*, that is, by requiring her to run for reelection every so often. Holding reelections creates two major potential benefits. First, it may induce an official who is otherwise inclined (because she is noncongruent with society) to act in the public interest. Because the electorate may not always be able to evaluate the official's actions directly, this can be called the "moral-hazard-correcting" benefit of accountability. Second, reelections may allow the electorate to "weed out" the noncongruent officials altogether. This can be viewed as the "adverse-selection-correcting" effect.

But accountability also carries with it two serious possible drawbacks. In order to get reelected, an official may choose an action, not because it is right for society, but because it is popular. That is, she may *pander* to public opinion. Although some might call such pandering "responsiveness,"[8] it is in clear conflict with the rationale for representative democracy discussed above: that representatives can make better decisions than ordinary citizens.[9] Furthermore, if minority rights are a concern, the ability to remove officials from office through elections may give the majority too much power to shape the government.

A *constitution*—a specification of who gets to decide what—should strike a balance between these considerations. In this paper, we compare constitutions from the standpoint of public welfare. We focus mainly on three different modes for making decisions: (i) *direct democracy*, in which the public itself decides through a referendum; (ii) *representative democracy*, in which an official subject to reelection (a "politician") decides; and (iii) *judicial power*, in which a nonaccountable official (a "judge") decides.[10] We also show that, in our

[6] For example, the "great things" she does might consist of favors for a particular interest group, in which case her legacy benefits could include what the interest group does for her in return.

[7] The desire to hold office is a commonly assumed motive in the political economy literature dating back to Robert Barro (1973) and John Ferejohn (1986). It is our legacy motive that is nonstandard (although, we believe, quite realistic).

[8] Opinions differed in the 1787 U.S. Constitutional Convention on the degree to which officials should be responsive to public opinion. In this paper, however, we take the view of delegate George Clymer (see Charles Beard, 1913, p. 193), who wrote that "a representative of the people is appointed to think *for* and not *with* his constituents." In doing so, we adopt the usual political-science definition of "representative democracy" as a system in which voters do not *instruct* their representatives. The practice of instructing representatives was widespread in the 18th century (e.g., deputies to the Estates General in France, American states before the 1787 Constitution). The modern version of representative democracy gained acceptance in the 18th century in England, and with the 1787 Constitution in the United States and the 1789 revolution in France. See Manin (1997, Ch. 5) for more details.

[9] Received theories of democracy in political science, e.g., Robert Dahl (1956), often stress the importance of repeated elections for making government responsive to the public. We argue that "moral-hazard-correcting" responsiveness is beneficial, whereas simply carrying out what the public wants can be counterproductive.

[10] We use the term "judicial power" to refer to nonaccountable officials because, in most democracies, judges—at least, at the highest levels—are appointed rather than elected. In the United States, for example, all federal judges are appointed and with lifetime tenure. Most of what we say about "judges," however, applies equally well to appointed government bureaucrats whose tenure is not appreciably affected by their actions.

Interestingly (and consistent with the theory developed here) elected judges in the United States appear to "pander" more (and thus behave more like politicians) than their appointed counterparts. Specifically, Timothy Besley and Abigail Payne (2003) analyze employment-discrimination cases and find that in states where judges are subject to reelection discrimination charges are filed at a higher rate. They attribute this finding to an incentive rather than a

admittedly extremely simple basic model, the welfare-maximizing constitution generally reduces to one of these three modes (or a combination thereof).

Of course, the requirement that officials run for reelection is not only the only form of accountability in political life. After all, most appointed officials are accountable to their supervisors. Electoral accountability, however, is more straightforward to analyze; it avoids the need to model the motivations and beliefs of the supervisors.

I. Overview

A. *Outline*

In Section II, we set out a two-period model with a homogeneous electorate. In each period, there is a decision to be made between two possible actions. One action is "popular" in the sense that the electorate believes it to be optimal with better than fair odds. The electorate will either decide itself (direct democracy) or delegate the decision to an official, who knows which action is optimal. Each official is either congruent (i.e., she has the same preferences as the electorate) or noncongruent with society, although *ex ante* the electorate does not know which case holds. She also places some weight on holding office for its own sake. In the case of delegation, the first-period official will either stand for reelection just before period 2 (in the case of representative democracy), or remain in office automatically for the second period (the case of judicial power). There may be some chance that, before period 2, the electorate learns whether or not the first-period decision was optimal.

In Section III, we analyze this model for the case in which there is *no* chance that the electorate learns about the optimality of the first-period decision before period 2. For this "no feedback" case we show, in Section III, subsection A, that the comparison of our three modes of government turns on the strength of officials' office-holding motive. When this motive is strong, politicians always pander to public opinion[11] (choose the popular action), and so the best form of government (among the three) is either direct democracy or judicial power (depending on how much the electorate knows *ex ante* about the optimal action). When it is weak, then politicians always act on their legacy motivation, and elections offer some possibility to screen out noncongruent officials. Hence, in that case, representative democracy dominates judicial power (but still could be inferior to direct democracy if the public has a good idea *ex ante* of the optimal action). These considerations suggest that decisions of sufficiently great importance (ones for which the legacy motive is likely to dominate) are best taken by politicians rather than by judges (although these may also be decisions for which direct democracy fares better still).

In Section III, subsection B, we expand the set of possible governmental systems to include any scheme in which the decision on whether to retain a first-period official depends on the first-period action. We argue that when the office-holding motive is strong, no mechanism in this broader class dominates judicial power or direct democracy (assuming that the public cannot commit itself to a *random* election). When it is weak, however, a "hybrid" mechanism in which an unpopular official is replaced by direct democracy could be optimal.

Section III, subsection C–Section III, subsection F, consider several extensions. Section III, subsection C, makes it costly for an official to find out which action is best for her or for society and argues that a politician is less likely to incur that expense than a judge. We conclude that highly technical decisions are best taken by judges. Section III, subsection D, examines the issue of term lengths and points out that optimally they should balance the transition costs of

selection effect, i.e., elected judges are likely to be more generous in awarding damages. (And among states with appointed judges, those where judges serve life terms—so need not worry about reappointment—have even fewer discrimination charges filed.) Relatedly, Besley and Stephen Coate (2003) show that electricity prices paid by retail consumers are lower in those U.S. states that elect regulators. The literature also provides evidence (reviewed in Besley and Ann Case, 2003) that U.S. governors subject to term limits behave differently from those who are not.

[11] As we have already noted, there is evidence from the empirical literature that elected and appointed officials behave differently. In addition to the articles cited in footnote 10, work by Henning Bohn and Robert Inman (1996) and Andrew Hanssen (1999, 2000) suggests that elected judges (whom we would call "politicians") are more independent than appointed judges.

replacing officials (which make longer terms desirable) and the electorate's risk aversion (which argues for shorter terms). Section III, subsection E, asks whether politicians or judges should have more discretionary power, and suggests that politicians should have the edge because their decisions convey useful information to the public, unlike those of judges. Finally, Section III, subsection F, takes up the possibility of campaign promises and argues that, depending on how badly officials want to hold office, this can be either a boon or a bane.

In Section IV, we consider the case in which, with positive probability, the electorate learns whether or not the first-period decision was optimal before period 2. We show that, if the office-holding motive is strong, there are two (mutually exclusive) alternatives to the full pandering equilibrium we obtain in Section III: either (i) officials *always* choose the optimal action in the first period (if the probability of feedback is sufficiently high), or (ii) there is some chance that a noncongruent official will pander (a good thing), but otherwise officials act on their legacy motive (if the probability of feedback is moderate).

Finally, in Section V, we introduce the possibility of conflict between majority and minority preferences and show that representative democracy may do a better job than either direct democracy or judicial power when the probability that minority preferences should prevail is only moderate, but that judicial power is superior if the risk of minority oppression is sufficiently large. We interpret the U.S. Constitution as a device for switching control from elected to appointed officials when minority rights are jeopardized.

B. *Related Literature*

This paper borrows from several literatures. Our analysis of representative democracy builds on the theory of elections as a disciplining device (Barro, 1973; Ferejohn, 1986; and chapters 4 and 9 of Torsten Persson and Guido Tabellini, 2000). These are models of political agency, in which voters are *ex post* indifferent about whom they vote for,[12] and in which the reelection motive may induce elected officials to behave in congruence with the electorate's wishes. Our departures are the introduction of (i) pandering, which is possible because the electorate has only imperfect knowledge of the optimal policy, and (ii) adverse selection which arises from the possibility of officials' noncongruence.

The role of citizens' initiatives as a form of direct democracy is studied in Besley and Coate (2000, 2003) and John Matsusaka (1992). The latter paper provides an empirical analysis of 871 Californian ballot propositions and shows that politicians tend to leave distributional issues to the public and to tackle "good government" issues themselves.

Specific points made in this paper relate to disparate parts of the political economy literature. The notion that representative democracy gives rise to dynamic screening of politicians is reminiscent of Juan Carrillo and Thomas Mariotti's (2001) more general study of dynamic selection of leadership within a party. Papers by Persson et al. (1997), Mathias Dewatripont and Tirole (1999), Jean-Jacques Laffont and David Martimort (1999), and Laffont (2000) present arguments for separation of powers that differ from our pandering argument.

Work on the rationale for unaccountability (as opposed to unaccountability's *consequences*) is sparse. Much of the literature starting with Kenneth Rogoff (1985) emphasizes the benefit of having independent central bankers with preferences different from those of the electorate as a commitment device vis-à-vis markets. Antione Faure-Grimaud and Denis Gromb (2000) show that agency independence stabilizes policies when bureaucracies are captured by the industry. Matthew D. McCubbins et al. (1987) stress the *ex ante* control of agencies.

In its emphasis on welfare analysis, constitutional choice, and length of tenure, our paper is perhaps most closely related to the literature on posturing in corporate finance. This literature has argued that the threat of takeovers, liquidation, or replacement induces managers to adopt short-termist attitudes. They accordingly select

[12] Moral hazard is the only informational imperfection in models following the Barro-Ferejohn tradition. The absence of adverse selection implies that voters learn nothing about an official from her behavior, and thus are indifferent about whether or not to reelect her. Thus disciplining her relies on a particular resolution of this indifference.

inefficient investments that pay off quickly (e.g., Jeremy Stein, 1989; Dewatripont and Maskin, 1995; Ernst-Ludwig von Thadden, 1995) or induce income and dividend smoothing (e.g., Drew Fudenberg and Tirole, 1995). The analysis of intraparty competition in Bernard Caillaud and Tirole (2002) also stresses the impact of entrenchment and competition for leadership in a mechanism-design framework. Christopher Avery and Margaret Meyer (2000) study the reliability of recommendations by an evaluator who may be biased in favor of the agent to be evaluated and hired. An evaluator with career concerns may want to be tough to preserve her reputation vis-à-vis the principal. While career concerns always benefit the principal in the basic model, Avery and Meyer identify conditions, in particular on the correlation of the evaluator's preferences over time, under which reputational incentives are harmful.[13]

A phenomenon somewhat akin to pandering arises in Stephen Morris (2001), who examines a model in which an informed advisor is supposed to provide information to an uninformed principal with the same preferences. Morris shows that, despite the coincident preferences, the advisor may refrain from conveying her information truthfully if doing so might jeopardize her reputation with the principal (e.g., increase the possibility that the principal thinks that she is a "racist"). As in our model, this has the adverse welfare effect of possibly destroying useful information.

Finally, Brandice Canes-Wrone et al. (2001) analyze a career-concern model of political-incumbent policy choice in which, as in our model, the incumbent has policy expertise and there is a positive probability of feedback before the reelection date. However, Canes-Wrone et al. focus on a quite different set of issues. In particular, the incumbent attempts to signal talent (a high-quality official's information is better than that of a low-quality official) rather than congruence, and so the redistributive issues studied in Section V below do not arise. Also, the Canes-Wrone et al. model takes accountability as given and so does not broach the tenure issue that figures so prominently in our paper.

[13] Gilat Levy (2000) shows that a careerist judge overturns precedent more than is socially efficient, as such behavior is a signal of the judge's ability. That paper also looks at the interaction between this incentive and endogenous appeals.

II. The Basic Model

There are two periods, 1 and 2, and a pair $\{a, b\}$ of possible actions in each period. (We give these actions the same labels in both periods only for notational convenience. In fact, they should be thought of as different between periods, and not necessarily as describable *ex ante*.)

In this basic model, all voters have the same preference ranking[14] of the two actions, but do not know *ex ante* what this ranking is. The optimal action—the action that voters would favor if they knew their ranking—is drawn at random independently in each period. The probability that it is a is p ($>\frac{1}{2}$), which is common knowledge for the electorate. Thus, a is the "popular" action (in the sense that it would be chosen if the electorate did the choosing itself), and b the "unpopular" one. The parameter p is a measure of how much the electorate knows about the issue.[15] Two factors influence the value of p: technicality and familiarity. Technicality—the degree to which the issue requires specialized knowledge, say of economics or science—tends to reduce the value of p. By contrast, familiarity—how much exposure the electorate has had to this sort of question—will raise p (we would classify issues that are largely matters of basic values as "familiar").

We suppose that the electorate is interested in maximizing its expected utility. For most of the paper (but see Section III, subsection D) we will assume that the electorate obtains a payoff of 2 if the actions chosen in both periods are optimal, a payoff of 1 if just one action is optimal, and a zero payoff if neither is. That is, the electorate is "risk neutral."

Unless the constitution specifies direct democracy, the period 1 decision is delegated to

[14] We can accommodate heterogeneous preferences as long as they are such that maximizing overall welfare is the same as maximizing the welfare of the median voter. Thus, in the basic model, we are supposing that the welfare of a minority cannot outweigh that of its complement.

[15] In the case of a heterogenous electorate, p denotes the median voter's uncertainty about a; it is *not* to be interpreted as the *fraction* of voters who think a is optimal.

an official.[16] With probability π ($>\frac{1}{2}$), the official is "congruent"; that is, her preference ranking is the same as the voters would have, if they were fully informed. With probability $1 - \pi$, the official is "noncongruent";[17] her preferred action differs from that of electorate.[18] The parameter π can be interpreted as both a description of the underlying pool of candidates, which for now we will take to be exogenous—but see the discussion at the end of Section IV—and as a measure of the electorate's ability to screen officials.

We suppose that, unlike the electorate, an official *knows* which action is best for her (and which is best for society). This assumption reflects the official's greater incentive to be well informed (or, alternatively, her greater expertise and resources).

To measure an official's eagerness to hold onto power, we introduce a "notional discount factor" δ. For example, suppose that the official obtains utility G from selecting her preferred action,[19] and utility R simply from being in office (R may correspond to perks, prestige, etc.). If the official's rate of time preference is reflected by discount factor β, then the trade-off between second- and first-period payoffs is

$$\delta = \beta \frac{G + R}{G}, \tag{1}$$

since the official always selects her preferred action when in office at date 2. Notice that δ could be either greater or smaller than 1.

More generally, the notional discount factor δ is defined as the ratio of the official's payoff from remaining in office in period 2 to that from choosing her preferred action in period 1. It could be affected by considerations beyond rent from office-holding and legacy. For example, if a displaced official derived some benefit from her successor's choosing her preferred action, then δ would be somewhat smaller than the above formula suggest. In principle, δ could also be different for congruent and noncongruent officials (although, for simplicity, we assume that it is not).

We suppose that before period 2 the electorate learns with probability q whether or not the first-period action was the optimal one. With probability $1 - q$, the electorate learns nothing. Presumably the electorate will *eventually* find out about the optimality of this action, and so q can be thought of as a measure of the *speed* at which feedback accrues.

Provided that direct democracy is not called for in period 2, the electorate can either maintain the period 1 official in office (it is required to do so if the official was granted a two-period term), or draw a new official from the pool of candidates (i.e., elect a challenger). Because officials always choose their preferred action in period 2, the new official will select the optimal action with probability π.[20]

III. The No-Feedback Case

Let us assume in this section that the electorate obtains no feedback about the first-period decision before period 2 (i.e., $q = 0$). We first compare the three benchmark institutions (direct democracy, representative democracy, and judicial power), next ask whether there exists an institution superior to the best of those three, and then go on to consider several extensions.

A. *Comparison of Institutions*

Direct Democracy (*DD*).—Under direct democracy, the decision is determined solely by voters' prior beliefs, and so the popular action is selected at each date. Thus, the electorate's expected welfare is:

[16] We will assume that constitutional dictates cannot be evaded. For a discussion of this assumption, see Barry R. Weingast (1997).

[17] With a heterogeneous electorate (see footnotes 14 and 15), the congruent official can be thought of as representing the interests of the median voter, whereas the "noncongruent" official represents some other group of voters.

[18] We are supposing that the preferences of the congruent official are perfectly aligned with the interests of the electorate, while those of the noncongruent official are diametrically opposed. Without any change in the qualitative results, we could relax this assumption, so that the noncongruent official simply had a higher *probability* than the congruent official of being at variance with the electorate in both periods.

[19] The assumption that this utility accrues only if the official *herself* selects the action captures the legacy motivation.

[20] The model can be extended to an overlapping-generations framework with two-period-lived officials. The challenger's incentives are then similar to those of the incumbent one period earlier. Since our focus is on the incumbent's behavior, our simpler two-period model involves little loss of generality (but see footnotes 29 and 31).

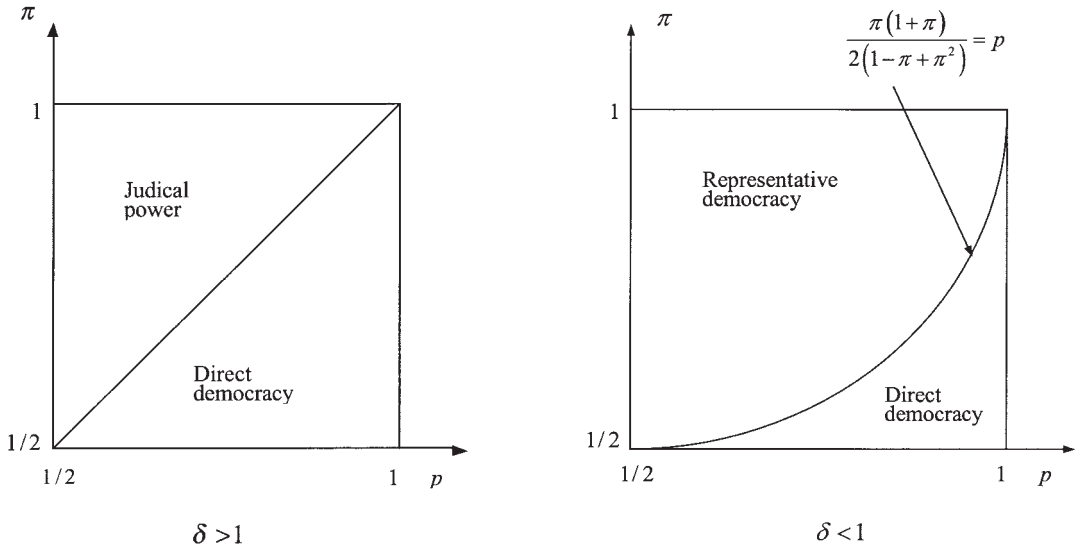

FIGURE 1. OPTIMAL CHOICE BETWEEN MODES

$$W^{DD} = 2p.$$

Judicial Power (*JP*).—Under judicial power, the official need not worry about reelection and so selects her preferred action in each period. The electorate's expected welfare is therefore:

$$W^{JP} = 2\pi.$$

Representative Democracy (*RD*).—There are two cases:

(a) *Strong office-holding motive* ($\delta > 1$): When $\delta > 1$, the politician values staying in office through period 2 above selecting her preferred action in period 1. In equilibrium, the politician selects the popular action a regardless of her true preferences and the optimal action. Voters then reelect her if and only if she chose a. We call this a *full pandering* (FP) equilibrium.[21] Notice that voters learn nothing about the politician's type from her first-period decision, since she always panders. Thus they are, in fact, indifferent between reelecting and not reelecting her. Equilibrium welfare is

$$W^{RD} = p + \pi.$$

Note that, generically,

$$W^{RD} < \max\{W^{DD}, W^{JP}\}.$$

This is not surprising since, in this case, representative democracy is tantamount to direct democracy in period 1 and to unaccountable judicial power in period 2. We conclude that, when $\delta > 1$, RD is dominated. The optimal choice between DD and JP turns on whether $p > \pi$ or $\pi > p$ (see case $\delta > 1$ of Figure 1).

[21] FP is not the only equilibrium, but we claim that it is the most reasonable one to focus on. The only other pure-strategy equilibrium is that in which the official always chooses *b* (the unpopular action). However, this "unpopular pandering" equilibrium is not *robust* to a small perturbation to the pool of candidate officials. Specifically, suppose that we introduce a small proportion ρ of officials who have weak office-holding motives (their discount factor is lower than 1): a fraction π of these are congruent, the rest noncongruent. In the Appendix, we show (see Proposition A1) that, for $\rho > 0$, the FP equilibrium of the text is the *unique* equilibrium in which the official does not randomize.

Finally, although there are mixed-strategy equilibria in which the official randomizes between *a* and *b*, each of these is *non-Markovian* in the sense that there are two different states (i.e., two realizations of the uncertainty about the official's congruence and action *a*'s optimality) in which all actors have exactly the same preferences and yet behave differently in the two states. These equilibria are, therefore, eliminated by the requirement that equilibrium strategies be Markovian (see Proposition A1).

(b) *Weak office-holding motive* ($\delta < 1$): When $\delta < 1$, the politician chooses her preferred action in period 1, i.e., there is no pandering. The electorate can now draw inferences about the politician from this choice. Specifically, the posterior probability that the politician's preferences are congruent with those of the electorate is

$$\frac{\pi p}{\pi p + (1-\pi)(1-p)} \ (>\pi),$$

when the official has chosen a in period 1; and

$$\frac{\pi(1-p)}{\pi(1-p) + (1-\pi)p} \ (<\pi),$$

when she has selected b. Thus, in equilibrium, the official will be reelected if and only if she has chosen the popular action. The electorate's welfare is therefore

$$W^{RD} = \pi[1 + p + (1-p)\pi] + (1-\pi)p\pi = \pi[1+\pi+2p(1-\pi)].$$

Representative democracy now strictly dominates judicial power: The two generate the same first-period behavior, but RD allows the electorate to replace an official whose behavior suggests noncongruence. Representative democracy dominates direct democracy if and only if

$$2p < \frac{\pi(1+\pi)}{1-\pi+\pi^2} \tag{2}$$

(see case $\delta < 1$ of Figure 1). Note that the "boundary" $\frac{\pi(1+\pi)}{2(1-\pi+\pi^2)} = p$ between RD and DD in this case is *below* the corresponding boundary $\pi = p$ between JP and DD in case $\delta > 1$. That is, DD is more likely to be optimal in case $\delta > 1$ than in case $\delta < 1$. This is because in the latter case, RD could be optimal even if $p > \pi$ provided that the welfare gain from having the opportunity to oust a possibly noncongruent official is big enough.

Observe that in the no-feedback case ($q = 0$), the only benefit of accountability is the possibility of screening out noncongruent officials. That is, in this case, accountability does not induce the official to act on behalf of the electorate (when $\delta > 1$, the official panders; when $\delta < 1$, she acts in her own interest).

We have implicitly been supposing that all decisions are equally important in the sense that they deliver the same potential legacy payoff to the official. But we can readily accommodate variations in this payoff. Imagine that the legacy payoff is drawn each period from a probability distribution with mean G. Suppose that, in period 1 a politician faces an especially important issue—e.g., whether to go to war—generating potential legacy payoff G', with $G' > G$. Then (if the second period issue is not yet known) the notional discount factor for this decision is

$$\delta' = \beta\left(\frac{G+R}{G'}\right)$$

and therefore *lower* than that in (1) (we are focusing only on the first-period decision, because the magnitude of the legacy payoff does not affect second-period behavior). Such a decision would thus be less likely to generate pandering and therefore more apt to be best allocated to representative democracy rather than to judicial power (note that the advantage of RD is not that it leads to better first-period decisions than JP but that it provides an opportunity to screen officials). We conclude that, ceteris peribus, *decisions generating large legacy payoffs should be assigned to* RD *over* JP (for such discriminatory assignment to be possible, some aspect of the decision must be describable in advance, e.g., that it entails whether or not to go to war). Of course, issues that produce large potential legacy payoffs are likely to generate large potential social payoffs as well. Notice that if the social payoff from an optimal first-period decision increases, the boundary between RD and DD in Figure 1 ($\delta < 1$) would move upwards, that is, RD would be less likely to generate greater expected welfare than DD. This is because as the ratio of first-period to second-period payoffs rises, the comparative benefit from ousting a noncongruent official after period 1 declines.

B. *Mechanism Design*

Moving beyond the three systems DD, RP, and JP, let us consider a more general system for public decision-making in which an official makes the first-period choice and x_a and x_b are her probabilities of being reelected after selecting the popular and unpopular actions, respectively (our model is very simple, and so x_a and x_b are the only instruments we have). To obtain an upper bound on social welfare, we first assume that these probabilities x_a and x_b are *contractible* (e.g., that it is somehow possible to write a constitutional provision that if an official chooses *a* she will be reelected with probability x_a). We then enquire whether the upper bound can be reached through an institution that does not require such contractibility.

Suppose that the official prefers action *i* over action *j*, where $i, j \in \{a, b\}$. She will select her preferred action if

$$1 > \delta(x_j - x_i),$$

and will pander if

$$1 < \delta(x_j - x_i).$$

Note that, given her preferences, the official's incentive to pander does not depend on whether she is congruent or not (this will no longer be true when we consider the case $q > 0$). That is, a congruent official who prefers *a* has an objective function that is identical to that of a noncongruent official who prefers *a*. Following footnote 21, let us focus on *Markov equilibrium*, meaning that these two types of officials adopt the *same* equilibrium behavior. Clearly, randomization or pandering by the official will not be welfare-maximizing; in all the equilibria we discuss below the official chooses her *preferred* action in period 1.

If $\delta < 1$ the only possible improvement on RD and DD occurs when $\pi < p$. Then, for a range of parameter values, the welfare-maximizing system consists of RD in period 1 followed by an election in which the voters decide either to return the incumbent to office (which, in equilibrium, will occur when the official has chosen the popular action) or else to hold a referendum on the second-period action (when the official has chosen the unpopular action). For $\delta > 1$, improving on JP requires reducing the difference $x_a - x_b$ to deter pandering. Probabilities $x_a = 1/\delta$, $x_b = 0$ constitute the optimal choice. But contractibility is required for such randomization. In its absence, DD or JP is optimal.

PROPOSITION 1: *Expected welfares from direct democracy and judicial power are*

$$W^{DD} = 2p \qquad \text{and} \qquad W^{JP} = 2\pi.$$

When $q = 0$ (i.e., there is no feedback about the optimality of the official's first-period decision), welfare from representative democracy depends on the strength of the official's office-holding motive (i.e., whether $\delta > 1$ or $\delta < 1$). When $\delta > 1$,

$$W^{RD} = p + \pi(< \max\{W^{DD}, W^{JP}\}),$$

and so representative democracy is dominated. Judicial power is superior to direct democracies if and only if $\pi > p$. When $\delta < 1$,

$$W^{RD} = \pi[1 + \pi + 2p(1 - \pi)],$$

and so representative democracy dominates judicial power. Representative democracy is superior to direct democracy for values of π and p such that (2) holds.

When $\delta > 1$, no other system (except those requiring contractible probabilities) is better than judicial power (if $\pi > p$) or direct democracy (if $\pi < p$). When $\delta < 1$, the hybrid scheme ($RD - DD$)—in which there is a first-period official who runs for reelection and, if defeated, is replaced by direct democracy—generates expected welfare

$$W^{RD-DD} = \pi + 2\pi p + p^2 - 2\pi p^2.$$

If $p > \pi$, then the hybrid is better than representative democracy and if p is not too much greater than π, it is the welfare-maximizing system (in particular, it also better than direct democracy).

C. *Costly Information Acquisition*

We have assumed that the official is perfectly informed about the payoff consequences of actions *a* and *b*. Suppose now that acquiring such information in each period entails a private cost *c*. That is, unless the official incurs *c*, she has no better information than the electorate. Assume that the official's gain *G* from selecting her preferred action satisfies

$$(3) \qquad (1-p)G > c.$$

This inequality is a necessary condition for an official under *any* system to acquire information.

In the case of *judicial power,* this condition is also sufficient. However, it is not generally sufficient under *representative democracy.* This is because information is less valuable to a politician who risks losing her job if she acts on it. Put differently, *pandering does not require costly information* (the implicit assumption here is that the cost of ascertaining public opinion is negligible relative to that of discovering the true consequences of *a* and *b*).

To confirm this logic, note that, under RD, a congruent official will acquire information only if

$$(4) \quad p[G+\beta[G+R-c]]+(1-p)G-c > pG+\beta[G+R-c],$$

where the left-hand side is the official's payoff if she acquires information (and acts on it). The corresponding condition for a noncongruent official is always satisfied. It is easy to verify that (4) is a more demanding constraint on *G* and *c* than (3). That is, if (4) holds (3) does too. If, as before, we take $\delta = [\beta(G+R)/G]$, then (4) can be rewritten as

$$\delta + \frac{c}{G}\left(\frac{1+p\beta-\beta}{1-p}\right) < 1.$$

Note that $\delta < 1$ is no longer a sufficient condition to avert pandering.

We conclude that information acquisition about the consequences of public decisions is less likely under representative democracy than under judicial power, a conclusion that suggests that *representative democracy will not accommodate technical decisions well.*

By contrast, under representative democracy, we would expect politicians to expend considerable resources to ascertain the prior beliefs of the electorate. Our model can be generalized to allow the politician to be uncertain about the electorate's view. In this case, and if $\delta > 1$, the politician will want to poll public opinion (provided the cost of doing so is low enough) to know what the electorate actually favors. An unaccountable official would not incur such expenditures, which are socially wasteful in our model. To sum up, accountability provides an incentive for wasteful information acquisition and a disincentive for acquiring information about the optimal decision. However, because our model assumes that learning the beliefs of the public is unrelated to determining the optimal action, this summary perhaps exaggerates the case against representative democracy.

D. *Term Lengths*

We have been taking term lengths as exogenous. In particular, we have simply *assumed* that a judge serves for two periods. But we might have supposed instead that the term is only one period long.

Actually, as the model stands, there is no difference (in welfare terms) between judges serving one period or two: both deliver expected welfare 2π. But one reason for this coincidence is that we have been assuming voters are essentially risk neutral. Let us now suppose instead that they are *risk averse.* Specifically, let $V(2)$ $(=2)$, $V(1)$, and $V(0)$ $(=0)$ be the utilities corresponding to two, one, and zero optimal decisions over two periods, where V is a strictly concave function.[22] Then, two-period terms still produce expected welfare 2π, but one-period terms now generate welfare $2\pi^2 + 2\pi(1-\pi)V(1)$. Thus, because $V(1) > 1$ (from risk aversion), one-period terms are better: it is less risky to have two draws from the candidate pool than just one.

Of course, by this logic, we should replace

[22] That V be concave is not the only reasonable possibility. If, for example, the payoff from an optimal decision in the first period were enhanced by an optimal second-period decision, then V might be convex.

officials as often as possible, which clearly does not make sense. After all, there are setup costs associated with every regime change, not the least of which is the learning-by-doing that a new official must undertake. The optimal term length will, therefore, strike a balance between setup costs and risk aversion.[23]

E. *Discretionary Power*

Judges and other nonaccountable officials typically have narrower spheres of action and less discretionary power than accountable officials, such as legislators. Thus, even such a powerful institution as the U.S. Supreme Court can consider only the cases brought before it, and, moreover, it is constrained (at least in principle) to decide them according to the existing law or the Constitution. By contrast, the U.S. Congress can set its own agenda and pass any law it wishes (although there may be a risk that the law will be struck down by the Court). One might ask whether such differences can be explained in our framework.

We cannot accommodate different degrees of discretion in our basic two-action model, but a simple extension allows us to do so. As before, let the social payoffs from the optimal and nonoptimal actions be 1 and 0, respectively. Introduce a status-quo alternative to actions a and b. This status-quo action yields known social welfare $\sigma \in [0, 1]$. The question is whether an official should be given the discretion to choose between a and b or be required to stick with the status quo. The answer depends on the value of σ. Discretion should be given to the official if σ is smaller than some cutoff σ^*.

Under *judicial power*, the optimal value of σ^* is

$$\sigma^*_{JP} = \pi = \frac{W^{JP}}{2}.$$

Under *representative democracy* and assuming that the politician does not pander (otherwise representative democracy is dominated),[24] we have

$$\sigma^*_{RD} = \frac{W^{RD}}{2} > \sigma^*_{JP}.$$

Discretion confers a benefit under representative democracy that is not available under judicial power: it provides information that helps society weed out noncongruent officials. Accordingly, *elected officials should have more discretion than unelected ones.*

F. *Campaign Promises*

In our model so far, the only information under RD that voters have about an official at the time of reelection is the action that she took in the first period. But in real elections, the electorate typically has more to go on than just the candidates' records. In particular, their campaign promises may be informative. Let us briefly examine how the analysis changes when candidates can make promises during the election after period 1 about what they would do in period 2. We suppose that, by that time, they know the optimal second-period action.

If a promise implied no commitment, then, in our model, it would play no substantive role at all. Regardless of her true intentions, a candidate would utter whatever helped her to get reelected, and so such pronouncements would be worthless. Let us suppose instead that if a candidate promises to take an action, then, when elected, she must carry out that pledge (perhaps because the loss of face from not doing so would be too great). Assume furthermore that challengers, as well as the incumbent, can make such promises.

There are two cases depending on whether or not candidates are willing to carry out their nonpreferred actions simply to get elected.[25] If they are willing to do so, then, in effect, we obtain pandering in both periods (there cannot

[23] When officials are accountable an additional consideration enters the picture: the length of term will affect their incentive to pander. Because this factor is more complicated, we will not take it up here.

[24] We assume here that the status quo, if chosen, is selected for two periods.

[25] In our basic model, an official always gets nonnegative utility (either R or $G + R$) from holding office. However, we can generalize this setup to allow for the possibility that an official who chooses her nonpreferred action derives *negative* utility overall, in which case she would not promise that action simply to get elected.

be an equilibrium in which congruent and noncongruent officials are separated because the latter officials would have the incentive to imitate the former merely to get elected).

In the case in which candidates pledge only their preferred actions, the electorate can infer which action is optimal with high probability if there are sufficiently many candidates: the optimal action will be promised by approximately a fraction p of candidates; the other action by approximately a fraction $1 - p$.[26] Thus, with enough candidates, equilibrium will entail the electorate selecting a candidate among those who have pledged the "more promised" action (the action that a higher proportion of candidates have pledged to carry out).

Thus, the welfare implications of campaign pledges depend critically on which case we are in. In the former case, pledges lead to the deterioration of RD through pandering in each period. But in the latter, welfare in both periods approaches the theoretical limit of 1 as the number of candidates grows (this gets at the intuitive idea that the electorate benefits from political competition).

IV. Feedback

A. *Forward-Looking Pandering*

Let us now assume that parameter q is positive, so that with positive probability the electorate learns before period 2 whether the first-period action was optimal. Expected welfares under direct democracy and judicial power are unchanged: under direct democracy feedback is irrelevant since optimal decisions are independent across periods; under judicial power, it is also irrelevant, since the official cannot be voted out. Thus, as before,

$$W^{DD} = 2p$$

and

$$W^{JP} = 2\pi.$$

Next consider representative democracy. Let x_a and x_b denote the (sequentially rational) equilibrium probabilities that the official is retained in office when no feedback is obtained. In the Appendix we show that if the fraction of candidate officials with weak office-holding motives (their δ is smaller than 1) is positive (even if arbitrarily small), then, in the event of feedback, an official is reelected in equilibrium if and only if she chose the optimal action in period 1 (see the proof of Proposition A2).

There are four possible "types" of official in the first period. In particular, let (C, a) correspond to a congruent official when a is the optimal first-period action (and hence the official's preferred action). Let (N, b) refer to a noncongruent official when the optimal action is b (so that the official prefers a). (C, b) and (N, a) are defined analogously. Let Δ denote the difference between the official's payoff from choosing a and that from choosing b:

$$\Delta(C, a) = 1 + \delta[q + (1 - q)(x_a - x_b)]$$

$$\Delta(N, b) = 1 + \delta[-q + (1 - q)(x_a - x_b)]$$

$$\Delta(N, a) = -1 + \delta[q + (1 - q)(x_a - x_b)]$$

$$\Delta(C, b) = -1 + \delta[-q + (1 - q)(x_a - x_b)].$$

We have listed the four Δs in descending order for the case $\delta q < 1$. When $\delta q > 1$, then $\Delta(N, a) \geq \Delta(N, b)$; the ranking is otherwise unchanged. It will make the analysis more interesting to suppose throughout that $\delta > 1$.[27]

There are three possible equilibria,[28] two of which are mutually exclusive.

Full Pandering Equilibrium.—As in Section III, full pandering entails that the official always selects the popular action in equilibrium and is reelected if and only if she adheres to equilibrium. The necessary and sufficient condition for such an equilibrium to exist is that $\Delta(C, b) \geq 0$ when $x_a = 1$ and $x_b = 0$, that is,

[26] If there is a cost to making campaign pledges, then some candidates who prefer the nonoptimal action may refrain from making pledges at all, since they are unlikely to be elected.

[27] For $\delta < 1$, the possibility of feedback does not alter the official's first-period behavior: she always chooses her preferred action. But feedback allows the electorate to learn with *certainty* whether or not the official is congruent.

[28] Here we are assuming that, as in footnote 21, a small proportion of officials who have weak office-holding motives are introduced and this proportion is then sent to zero.

$$\delta(1 - 2q) \geq 1.$$

Thus, the official must have a strong office-holding motive, and feedback must be sufficiently slow. As noted in the previous section, FP makes representative democracy unattractive, since welfare is then $p + \pi$, which is less than max $\{W^{DD}, W^{JP}\}$.

Forward-Looking Pandering.—In this next kind of equilibrium, the official selects the optimal action in the first period regardless of her own preference. That is, types (C, a) and (N, a) select action a and types (C, b) and (N, b) choose action b. In the absence of feedback, the official is always reelected. A necessary and sufficient condition for such an equilibrium to exist is that $\Delta(N, b) \leq \Delta(N, a)$, or as we noted above,

$$\delta q \geq 1.$$

We call the official's behavior in this equilibrium *forward-looking pandering* (FLP) to reflect the fact that she is pandering not to the current electorate but rather to voters of the future who may have received feedback about her first-period performance.[29] FLP illustrates the disciplinary role traditionally attributed to elections in representative democracy (indeed, it constitutes a pure moral-hazard-correcting effect; there is no correction of adverse selection). It generates welfare

$$1 + \pi \ (> W^{JP}).$$

In the Appendix (Proposition A2) we show that if $q\delta > (1 + \delta)/2$, the *unique* limit of perfect Bayesian equilibria when a proportion ρ of officials with weak office-holding motives is introduced and then sent to zero is the FLP equilibrium in which an official is reelected if and only if either (i) there is feedback and she has chosen the optimal action or (ii) there is no feedback and she has chosen action a. Furthermore, Proposition A3 shows that if $(1 + \delta)/2 > q\delta > 1$, then the only two possible limits as $\rho \to 0$ are an FLP equilibrium in which, if there is no feedback, the electorate randomizes over reelection (this limit *always* exists for this range of parameter values) and a full pandering equilibrium (if $\delta(1 - 2q) \geq 1$).

Partial Pandering.—When

$$\delta q < 1,$$

then FLP is no longer an equilibrium. The only equilibrium possibility (other than full pandering) is that types (C, a) and (N, b) select action a, type (C, b) selects action b, and type (N, a) selects her preferred action b with probability y and panders with probability $1 - y$, where

$$\frac{\pi(1 - p)}{\pi(1 - p) + (1 - \pi)py} = \pi,$$

or

$$y = \frac{1}{p} - 1.$$

Thus (N, a) sometimes panders, but the other three types never do.

To compute social welfare in this *partial pandering* (PP) equilibrium, note that, without feedback, the electorate is indifferent between replacing the official and keeping her, regardless of her first-period behavior (because, after either choice of action, the conditional probability that she is congruent is π). So, without feedback, second-period welfare always equals π, and overall welfare is therefore:

$$[\pi + (1 - \pi)p(1 - y)] + \pi$$
$$= [\pi + (1 - \pi)(2p - 1)] + \pi > W^{JP}.$$

The PP equilibrium generates greater welfare than JP in the first period: either an official chooses her preferred action (as in JP) or, if noncongruent [more specifically, if of type (N, a)], possibly panders (which enhances welfare). PP also generates greater welfare than JP in the second period: if there is no feedback after the first period, the two are the same. But if there *is* feedback, PP improves the likelihood of a con-

[29] If we instead adopted an overlapping-generations framework, the official would no longer always choose the optimal action in equilibrium, even in the case $\delta q \geq 1$. Instead we would obtain an equilibrium very much like what we call partial pandering (see footnote 31).

gruent official, since noncongruent officials are more likely to be thrown out of office. Notice that the PP equilibrium incorporates both adverse-selection-correcting and moral-hazard-correcting effects. In the Appendix, we show (Proposition A4) that when $\delta > 1$ and $q\delta < 1$, one limit of perfect Bayesian equilibria as the proportion ρ of officials with weak office-holding motives goes to zero is a PP equilibrium.[30] The only other possible limit [if $\delta(1 - 2q) \geq 1$] is the full pandering equilibrium.

To summarize, we have:

PROPOSITION 2: *Suppose that officials' office-holding motives are strong* ($\delta > 1$). *Feedback* ($q > 0$) *creates scope for socially beneficial forward-looking pandering*[31] (*when* $\delta q \geq 1$) *or partial pandering* (*when* $\delta q < 1$) *and eliminates full pandering when* $\delta(1 - 2q) < 1$. *These three sorts of equilibria are the only limiting possibilities when a proportion of officials with weak office-holding motives is introduced and then sent to zero.*

Thus, the equilibria of this model exhibit the full range of potential benefits from accountability. In the absence of feedback ($q = 0$, Section III), the reelection process may help counteract adverse selection but does nothing to solve the moral hazard problem: either $\delta > 1$, in which case the politician panders and representative democracy is dominated; or $\delta < 1$, in which case behavior is the same as without accountability, and elections merely offer the prospect of removing noncongruent officials. With rapid enough feedback ($\delta q > 1$) the forward-looking pandering equilibrium exists and completely solves the moral hazard problem in the first period, but does not help against adverse selection. With moderately fast feedback ($\delta q < 1$, $q > 0$) the partial pandering equilibrium exists and to some extent counteracts both moral hazard and adverse selection.

B. *Performance Measurement Within Government*

We have seen that an increase in the quality q of performance measurement can boost the case for representative democracy. Indeed, there is a potential advantage from raising q beyond the direct benefit of inducing a forward-looking or partial pandering equilibrium. We have been taking the pool of potential officials as given exogenously. But in practice it will depend on the cost a candidate incurs from running for office and her expected payoff from holding office. Notice that moving from full pandering to forward-looking or partial pandering raises the payoff for congruent officials and reduces that for noncongruent officials. Thus, through the self-selection it promotes, such a move is likely to improve the composition of the pool.

We have assumed that q is exogenous, but institutional design in practice affects performance measurement. Of particular interest here is the creation of independent evaluation boards (e.g., the U.S. General Accounting Office) to write detailed opinions about the performance of elected officials (e.g., the budget designers). Such evaluation boards do not share control with elected officials. Rather, they perform an advisory or monitoring role. They can be viewed as raising the quality q of the electorate's performance measurement.

Although we often take such institutions for granted, we might enquire into their rationale: why is the monitor most often[32] an unaccountable body? And why are the evaluated officials generally accountable?

The answer to the latter question is straightforward in our model: improved performance measurement pays off only if the evaluee is accountable. Indeed, the effect of performance measurement grows with the degree of accountability.

The former question is more challenging. A tentative answer could be that if an official has

[30] In Section III, we rule out equilibrium in which the official randomizes by appealing to Markov equilibrium (see footnote 21 and Proposition A1). Although partial pandering entails randomization by the official, it is consistent with the Markovian requirement because, once $q > 0$, the different types of official no longer have the same preferences.

[31] In footnote 29, we noted that if we used an overlapping-generations model instead of our two-period, once-off framework, we would no longer obtain a FLP even in the case $\delta q > 1$. Instead, we would get a PP equilibrium in which (i) types (C, a), (C, b), and (N, b) choose their preferred actions, (ii) type (N, a) panders with probability y, and (iii) the official is reelected only when there is feedback that she chose the optimal first-period action.

[32] To be sure, there also exist Congressional investigation committees in the United States.

the incentive to pander to the electorate, then so might an accountable monitor. In that case, the introduction of monitors would do little to expose panderers.

V. Tyranny of the Majority

We now relax the assumption of a homogeneous electorate in order to investigate minority politics. We will argue that, relative to JP, representative democracy gives more weight to the majority and is therefore more likely to undervalue the minority interests.

The tyranny of the majority is an old theme of political thought. We have already quoted Madison on this point. In *The Federalist Papers* Alexander Hamilton proposed that the judiciary should control the encroachments and oppressions of the representative body and that insulating it from accountability is important for this role:

> If, then, the courts of justice are to be considered as the bulwarks of a limited Constitution against legislative encroachments, this consideration will afford a strong argument for the permanent tenure of judicial offices, since nothing will contribute so much as this to that independent spirit in the judges which must be essential to the faithful performance of so arduous a duty.

Still, despite the risks that RD poses for minority rights, we will suggest that it safeguards them better than direct democracy (recall Butler and Ranney, 1994, on the pitfalls of democracy; see footnote 5).

We introduce a variant of the basic model in which there are two groups, the majority and the minority. To simplify the analysis, we assume that the majority *knows* that action a is its optimal choice. Similarly, the minority knows that action b is best for it. What is not known is which action maximizes *overall* welfare. With probability x the majority should prevail, because action a imposes only a small negative externality on the minority; let $B > 0$ be the overall social benefit of action a over action b in that case (we normalize social welfare under action b to be 0). With probability $1 - x$, the minority should prevail: action a imposes a large externality on the minority and generates overall net loss $L > 0$ relative to action b. B can be interpreted as the social loss when the minority blocks a socially desirable move, whereas L is the social loss from a move that oppresses the minority.

TABLE 1—OFFICIALS' PREFERRED ACTIONS

	Type of official		
Case	*M*	*m*	*W*
Majority should prevail	*a*	*b*	*a*
Minority should prevail	*a*	*b*	*b*

Finally, we assume that there are three types of officials: those who are congruent with the majority (labeled "*M*" and having probability π_M); those who are congruent with the minority (labeled "*m*" and having probability π_m); and those who balance the two groups' interests and so have preferences in line with social welfare (labeled "*W*" and having probability π_W). The preferences of the three types of officials are summarized in Table 1.

Let us look at the welfare implications of our three benchmark institutions:

Direct democracy: Under DD, the majority always prevails, and so per-period social welfare is

$$xB - (1 - x)L.$$

Judicial power: A nonaccountable official selects her preferred policy, and so per-period welfare under JP is

$$\pi_M[xB - (1 - x)L] + \pi_m[0] + \pi_W[xB].$$

As one would expect, direct democracy fares better relative to judicial power when the loss from the externality is small (L small) or unlikely (x large), and when officials tend to be biased toward interest groups (π_W low).

Representative democracy: The analysis of RD is similar to that of Section III. Let us begin with the pandering case $\delta > 1$. In that case, even a *W* official who knows that the minority should prevail prefers to cater to the majority in period 1. As in Section III, RD delivers the same outcome as DD in period 1 and the same as JP in period 2. It is therefore dominated.

Next suppose that $\delta < 1$, so that there is no pandering. Action a is chosen by an *M* official

and, with probability x, by a W official. Action b is selected by an m official and, with probability $1 - x$, by a W official. Thus, the majority will not reelect an official who has chosen b, and so representative democracy weeds out m and (less effectively) W officials.

PROPOSITION 3: *For all δ, (i) there exist thresholds x^* and x^{**} ($x^* < x^{**}$ for $\delta < 1$, $x^* = x^{**}$ for $\delta > 1$, where $0 < x^* \leq x^{**} < 1$) such that if $x < x^*$, JP is optimal, if $x^* \leq x \leq x^{**}$, RD is optimal, if $x^{**} < x$, DD is optimal, where x is the probability that the majority should prevail. (ii) Similarly, there exist thresholds $\left(\frac{B}{L}\right)^*$ and $\left(\frac{B}{L}\right)^{**}$ $\left(\left(\frac{B}{L}\right)^* = \left(\frac{B}{L}\right)^{**}$ if $\delta > 1\right)$ such that if $\frac{B}{L} < \left(\frac{B}{L}\right)^*$, JP is optimal, if $\left(\frac{B}{L}\right)^* \leq \frac{B}{L} \leq \left(\frac{B}{L}\right)^{**}$, RD is optimal, if $\left(\frac{B}{L}\right)^{**} < \frac{B}{L}$, DD is optimal, where B/L is the ratio of the welfare loss from minority blocking to that from majority oppression.*

PROOF:

Let $w^{DD} \equiv W^{DD}/2$, $w^{JP} \equiv W^{JP}/2$, and $w^* \equiv xB$. Then

$$W^{RD} = w^{JP} + \pi_M w^{DD} + \pi_m w^{JP} + \pi_W[xw^* + (1 - x)w^{JP}].$$

W^{DD}, W^{JP} and W^{RD} are increasing in x. W^{JP} is the highest of the three for $x = 0$, W^{DD} the highest for $x = 1$, and, for the value x such that $W^{DD} = W^{JP}$,

$$W^{RD} > W^{DD} = W^{JP},$$

since

$$w^* > w^{DD} = w^{JP}.$$

Thus, for low values of x or B/L, JP is optimal; these are the ranges for which minority rights are most important, and RD and DD lead to the majority-preferred decision too often. For moderate values of x or B/L, RD is optimal; RD is better than DD because it entails some chance that the decision will be taken by an m or W official, but RD does not overweight m officials' influence as does JP. Finally, for high values of x or B/L, DD is optimal (since, in this section, we assume away imperfect knowledge about the optimal action on the part of the electorate, we might as well let the majority decide directly if the minority stands to lose relatively little).

The Constitution as a Decision-Allocating Device.—Proposition 3 suggests a possible interpretation of the U.S. Constitution. Let us suppose that x is rarely so high that DD is desirable. Then, it becomes desirable to distinguish between those cases in which x is (moderately) high (so that RD is optimal) and those in which x is low (JP is optimal).

The Constitution provides a means of making this distinction operational. If a decision bears on some Constitutional guarantee, this is a sign that x is low, i.e., that a minority's rights are in jeopardy. And, indeed, the decision mechanism in such a case is to assign the decision to the federal courts, the embodiment of judicial power. In the absence of a Constitutional issue, however, the presumption is that x is not especially low, and the policy decision remains in the realm of representative democracy.

VI. Summary and Avenues for Further Research

The paper's main findings can be summarized as follows:

(1) Accountability has two potential benefits. It allows voters to remove officials whose interests appear to be noncongruent with the electorate, but also gives noncongruent officials some incentive to act as though they were congruent (through the effect of forward-looking or partial pandering).
(2) However, accountability may encourage officials to pander to the electorate and overlook minority interests.
(3) Nonaccountability is most desirable when (a) the electorate is poorly informed about the optimal action, (b) acquiring decision-relevant information is costly, and (c) feedback about the quality of decisions is slow. Therefore, technical decisions, in particular,

may be best allocated to judges or appointed bureaucrats.

(4) The most important decisions should be taken by elected rather than nonaccountable officials (although direct democracy may have the edge over representative democracy for such decisions).

(5) The discretion of nonaccountable officials should be more limited than that of accountable ones.

(6) Nonaccountability is preferable when the majority's preferences are very likely to inflict large negative externalities on the minority. However, representative democracy is better in this case than direct democracy, and, for moderate probabilities of negative externalities, may constitute a desirable compromise between the two extremes.

This paper is only a first step in the analysis of how constitutional design affects public choices. Many other issues of interest come to mind. First, extending the model to more than two periods would lead to a richer set of feasible institutions. For example, in a four-period model, the policy of giving an official an initial tenure of two periods and then making her mandate renewable by vote in each of the last two periods can be shown to make some sense. Second, the analysis could be extended to an international context; we could get at the idea that elected officials may have a harder time establishing credibility internationally (e.g., in arms talks or in negotiating with the IMF) because of their incentive to pander domestically. That is, pandering to multiple audiences may be difficult. Third, we could study alternative nomination processes for judges and agency commissioners rather than maintain our current assumption that they are simply selected at random. Fourth, we could enrich the model to allow for the possibility that campaign contributions affect politicians' choices. Fifth, the model could be extended to allow elected officials to "pass the buck" by calling for a public referendum. Finally, some of our analysis might be applied to the media. People often read newspapers or watch television networks that confirm their prejudices; in other words, the media pander in much the same way that politicians do.

We hope that these extensions and others will be pursued in future research.

Appendix

We shall suppose that there is a small proportion ρ of officials with weak office-holding motives (so that they will choose actions in the first period according to their true preferences). Call these the *ideological* officials. A proportion π of these are congruent; the remainder $1 - \pi$ are noncongruent.

PROPOSITION A1: *When* $\delta > 1$ *and* $q = 0$, *the unique pure-strategy perfect Bayesian equilibrium of RD in the limit when* $\rho \to 0$ *is a pure pandering equilibrium in which the official always chooses a in period* 1 *and is reelected if and only if she chooses a. The same conclusion holds for mixed-strategy equilibria if we impose the Markov requirement of footnote 21.*

PROOF:

Throughout assume that $\rho > 0$. Suppose, contrary to the proposition, there is a pure-strategy equilibrium in which all types of nonideological officials choose *b* in period 1. Then the choice of *a* will lead the electorate to believe that the chooser is a congruent ideological official with probability $\pi p/[\pi p + (1 - \pi)(1 - p)] > \pi$ and so will reelect her. By contrast, the choice of *b* will lead the electorate to believe that the official is noncongruent with probability exceeding $1 - \pi$, and so will not reelect. Thus, nonideological type (C, a) cannot choose *b* in period 1 after all.

Suppose next that there exists a pure-strategy equilibrium in which some nonideological types choose *a* and others choose *b*. Then, for ρ sufficiently small, the probability of an official's being congruent conditional on her choosing *a* in the first period will either be strictly greater than π or strictly less than π. In the former case, an official will be reelected if and only if she chose *a*, and in the latter if and only if she chose *b*. So, in either case, all nonideological officials will have the incentive to behave the same way (in order to get reelected), a contradiction. Thus the proposition is established for pure-strategy equilibria.

Next, allow for mixed-strategy equilibria but impose the Markov requirement. Suppose that at least one type of nonideological official

chooses a with positive probability in equilibrium. Because $\delta > 1$ note that the (C, a) and (N, b) types have a stronger preference for a over b than do the (C, b) and (N, a) types. Hence, in equilibrium, the former group chooses a with at least as high probability as the latter group. Furthermore, from the Markov assumption, the (C, a) and (N, b) types must play a with the same probability. Similarly the (C, b) and (N, a) officials must play a with the same probability. Thus, since the proportion of (C, a)s to (N, b)s is $\pi p/(1 - \pi)(1 - p)$ $(> \pi/(1 - \pi))$, the electorate will attach a probability greater than π to the official's being congruent if a is chosen and so will reelect her. [This is so even if the (C, b) and (N, a) types choose a with probability 1, because in this case, the ideological officials will tip the balance in favor of reelection]. Symmetrically, an official will fail to be reelected if she chooses b.

Because officials are reelected if and only if they choose a, nonideological officials will opt for a, since $\delta > 1$.

PROPOSITION A2: *When* $q\delta > (1 + \delta)/2$, *the unique limit of perfect Bayesian equilibria as* $\rho \to 0$ *is an FLP equilibrium in which an official is reelected if and only if she has chosen* (*i*) *the optimal action when there is feedback or* (*ii*) *action a if there is no feedback.*

PROOF:

We claim first that, in equilibrium with $\rho > 0$, if the electorate obtains feedback about an official's first-period choice, the official will be reelected if and only if the decision was optimal.

To see this, suppose that a is the chosen decision and that the electorate has learned that it is optimal. If, in equilibrium, no type of nonideological official chooses a with positive probability when a is optimal, the electorate will infer from the feedback that a congruent ideological official has chosen a, and so will reelect. Similarly, if in equilibrium some type of nonideological official chooses a with positive probability, when a is optimal, then the probability that (C, a) chooses a must be at least as big as the probability that (N, a) does so [since (C, a)'s preference for a is stronger than that of (N, a)]. Thus, if it incorporates the possibility of a congruent ideological official, the probability that an official is congruent conditional on a having been chosen and revealed optimal is strictly greater than π, and so the electorate will again reelect the official.

Suppose instead that a has been revealed to be nonoptimal. If, in equilibrium, no nonideological type chooses a with positive probability when a is nonoptimal, the electorate will infer from the feedback that a noncongruent ideological official has chosen a, and so will not reelect. Similarly, if, in equilibrium, some nonideological official chooses a with positive probability when a is nonoptimal, then the probability that (N, b) chooses a must be at least as big as the probability that (C, b) does so [since (N, b)'s preference for a is stronger than that of (C, b)]. Thus, including the possibility of a noncongruent ideological official, the probability that an official is noncongruent conditional on a having been chosen and revealed nonoptimal is strictly greater than $1 - \pi$, and so the electorate will not reelect the official, establishing the claim for a. The argument for b is entirely symmetric.

Now consider a nonideological type (N, b) official. If she chooses b, her payoff, from the above claim, is at least δq. If instead she chooses a, her payoff is at most $1 + \delta(1 - q)$. But, by hypothesis, the former exceeds the latter. Hence, in equilibrium, type (N, b) cannot choose b, and the same for (C, b) [since (C, b)'s preference for b is even stronger]. Similarly, types (N, a) and (C, a) choose a in equilibrium, establishing that any equilibrium must be FLP.

Suppose that a has been chosen in the first period. In equilibrium, nonideological types (C, a) and (N, a) and ideological types (C, a) and (N, b) choose a. Hence, if there has been no feedback, the probability that the official is congruent conditional on the choice of a is strictly greater than π, and so she will be reelected. Similarly, she will not be reelected if she has chosen b and there is no feedback.

PROPOSITION A3: *When* $\dfrac{1 + \delta}{2} > q\delta > 1$, *one limit of PBEs as* $\rho \to 0$ *is an FLP equilibrium in which, if there is no feedback, the electorate randomizes over reelection. The only other possible limit* [*if* $\delta(1 - 2q) \geq 1$] *is a full pandering equilibrium.*

PROOF:

Fix $\rho > 0$. From the proof of Proposition A2, in any equilibrium, if the electorate obtains

feedback about an official's first-period choice, then the official will be reelected if and only if the decision was optimal. Suppose that there exists an equilibrium in which nonideological type (N, a) chooses b with positive probability. Then, (N, b) and (C, b) both choose b with probability 1 [since for $\delta q > 1$ their preference for b is even stronger than that of (N, a)]. Hence, without feedback [and in view of the ideological types (N, a) and (C, b) who choose b], the probability that an official is noncongruent conditional on b having been chosen is strictly greater than $1 - \pi$, and so an official who chooses b will not be reelected. This means that (N, a)'s payoff from choosing b is 1. By contrast, if she chooses a, she will be reelected (whether or not there is feedback), and so her payoff will be δ, which, by hypothesis, is greater, a contradiction. We conclude that (N, a) must choose a with probability 1 in equilibrium, which implies that the same is true of (C, a).

Suppose that there exists an equilibrium in which nonideological type (N, b) chooses b with probability 1. In that case, the probability without feedback that an official is noncongruent conditional on her having chosen b is strictly greater than $1 - \pi$ (thanks to the fact that, in the absence of feedback, the probability that an ideological official is noncongruent conditional on her having chosen b is strictly greater than $1 - \pi$), and so (N, b)'s payoff from b is δq. By contrast, if she chooses a, she will be reelected if there is no feedback, and so her payoff will be $1 + \delta(1 - q)$, which, by hypothesis, is greater, a contradiction. We conclude that, in any equilibrium, (N, b) must choose a with positive probability.

Consider an equilibrium in which nonideological type (N, b) randomizes between a and b. Then

$$\text{(A1)} \qquad \delta q + \delta(1 - q)\beta = 1 + \delta(1 - q)\alpha,$$

where the left- and right-hand sides of equation (A1) correspond to the payoffs from b and a respectively, and β and α are the probabilities of reelection in the absence of feedback when, respectively, b and a have been chosen. From equation (A1) and hypothesis, we obtain

$$1 > \alpha - \beta > 0.$$

That is, when there is no feedback, the electorate must randomize between reelecting and not reelecting, either when the official has chosen a, or when she has chosen b (or in both cases). This implies that the probability of an official's being congruent conditional on a having been chosen is π. Now, the nonideological types other than (N, b) who choose a in equilibrium are (C, a) and (N, a) and the ideological types are (C, a) and (N, b). Hence, the probability that (N, b) chooses a must be only big enough to offset the effect of the ideological officials. Thus, as $\rho \to 0$, equilibrium converges to one in which (N, b) [and hence (C, b)] plays b with probability 1—i.e., an FLP equilibrium—and the electorate randomizes over reelection when there is no signal, as the proposition claims.

The only remaining equilibrium possibility is that nonideological type (N, b) chooses a with probability 1. Now, if (C, b) does so too, then we are done, because this will be a pure pandering equilibrium. Hence, assume that (C, b) chooses b with positive probability. If this probability is high enough to outweigh the effect of the ideological type (N, a), who chooses b, then, without feedback, an official who chooses b will be reelected, implying that (N, b)'s payoff from b is δ, whereas that from a is only 1, a contradiction of the fact that (N, b) chooses a. We conclude that the probability that (C, b) chooses b must be sufficiently small and converge to 0 as $\rho \to 0$. Thus, in the limit, we obtain a full pandering equilibrium, as claimed.

PROPOSITION A4: *When* $\delta > 1$ *and* $0 < q\delta < 1$, *one limit of PBEs as* $\rho \to 0$ *is a PP equilibrium* (*which is also a Markov equilibrium*). *The only other possible limit* [*if* $\delta(1 - 2q) \geq 1$] *is a full pandering equilibrium.*

PROOF:

Fix $\rho > 0$. Again, it can be shown that, in any equilibrium, an official is reelected when there is feedback if and only if her first-period decision was optimal. Suppose that there exists an equilibrium in which nonideological type (N, a) chooses b with probability 1. Then the probability that an official is noncongruent conditional on her having chosen b is greater than $1 - \pi$, and so, without feedback, an official choosing b will not be reelected. Thus, (N, a)'s payoff from b is 1, whereas her payoff from a is δ, a contradiction, since the latter is bigger. We conclude that nonideological type (N, a) must

choose a with positive probability in equilibrium. If she also chooses b with positive probability, then, since $0 < q\delta < 1$ implies that $\Delta(C, a) > \Delta(N, b) > \Delta(N, a) > \Delta(C, b)$, type (C, b) will choose b and types (C, a) and (N, b) will choose a: the equilibrium is PP. Notice that because all four types have different preferences, this is also a Markov equilibrium.

Assume, therefore, that (N, a) chooses a with probability 1. Now if nonideological type (C, b) chooses b with high enough probability to outweigh the effect of the ideological types (C, b) and (N, a), who choose b, then, without feedback, an official who chooses b will be reelected, implying that (N, a)'s payoff from b is $1 + (1 - q)\delta$, whereas that from a is δq. But, by hypothesis, the former is bigger than the latter, a contradiction. We conclude that nonideological type (C, b) can choose b with probability at most on the order of ρ. But as $\rho \to 0$, (C, b)'s strategy converges to one in which a is chosen with probability 1, implying that the limiting equilibrium is full pandering.

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