Chapter Two

Electoral Accountability and the Control of Politicians: Selecting Good Types versus Sanctioning Poor Performance

The concept of accountability is not by itself problematic, or at least it should not be. We say that one person, *A*, is accountable to another, *B*, if two conditions are met. First, there is an understanding that *A* is obliged to act in some way on behalf of *B*. Second, *B* is empowered by some formal institutional or perhaps informal rules to sanction or reward *A* for her activities or performance in this capacity. In this sense, employees are accountable to their employers, CEOs to their boards and their boards to stockholders, department chairs to the departments they represent, and elected politicians to their electorates. In the jargon of economic theory, relations involving accountability are *agency relationships* in which one party is understood to be an "agent" who makes some choices on behalf of a "principal" who has powers to sanction or reward the agent.[1]

Most interesting questions about accountability in political and economic contexts concern not its definition but rather the understanding of what activities or performance the agent is

[1] One might define a weaker notion of "accountability" in which one person is accountable to another if it is understood that the first has a responsibility to act on behalf of the second, independent of whether the second has sanctioning or rewarding instruments. I think this blurs accountability with moral responsibility and does not square with ordinary usage, which typically involves the presumption of monitoring and sanctioning instruments.

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accountable for, the nature of the principal's sanctioning or rewarding instruments, and the problem of to what extent a given system of incentives will lead the agent to act on behalf of the principal, that is, to do what the principal would want. In addition, in the case of *electoral* accountability, additional problems arise from the presence of multiple principals (voters, but perhaps also courts and other elected officials in some cases) rather than a single principal or a collective body that can act as a single principal. For instance, with multiple principals the question of saying what the principals would want can be difficult, even theoretically, as Arrow's theorem suggests.

There is an important prior question, however, about whether elections are best thought of in terms of accountability at all. Certainly, an important tradition in democratic theory understands elections as mechanisms of political accountability. In this view, elections are seen as a sanctioning device that induces elected officials to do what the voters want. The anticipation of not being reelected in the future leads elected officials not to shirk their obligations to the voters in the present (Barro 1973; Ferejohn 1986; Fiorina 1981; Key 1966; Manin 1997).

I begin by developing a four-step argument that questions whether elections are best conceived as mechanisms of accountability. The four steps may be summarized as follows. First, voters need not see elections as mechanisms that establish accountability; instead, they might understand elections as opportunities to choose a "good type" of political leader, one who would act on their behalf independent of reelection incentives. Second, if voters can distinguish good types to some degree, then it follows that electoral accountability is not necessary for elections to produce public policy that the principals (the voting public) want. Third, empirical observations about public opinion and elections in the United States (and probably other democracies) suggest that in fact voters think about elections more as opportunities to select good types than as mechanisms establishing accountability and, in consequence, good behavior by politicians. Fourth, this sort of understanding is not idiosyncratic or foolish, but may actually make a good deal of sense if one also believes that repeated elections *as sanctioning devices* have little ability to induce politicians to do what the voters would want done.

Even if voters think about elections more in terms of selection

than sanctioning, these two understandings are by no means incompatible or mutually exclusive. Indeed, successfully selecting for good types implies sanctioning bad types, which gives bad types an incentive to *appear* as if they were good types. Thus, if the electorate tries to select good types, then bad types may moderate their policy choices in the direction of what the electorate wants, as in the classical theory of electoral accountability. But then, insofar as bad types become harder to distinguish from good types, selection is rendered problematic. This brief argument suggests that selection and sanctioning necessarily interact and that the interaction has a strategic component (at least in the behavior of politicians).

Following the discussion of the four-step argument, I present a simple game model that depicts three views of how elections generate policy outcomes desired by voters: pure sanctioning ("moral hazard," or accountability), pure selection, and a mixed case suggested by the preceding paragraph. Consistent with the fourth point summarized earlier, I show that as the voters' ability to monitor politicians becomes very poor, the mixed case approaches a problem of pure selection, although the voters' ability to sort out good types on the basis of an incumbent's record also diminishes. Analysis of the mixed case also provides insight into the interaction between selection and sanctioning. For example, I show that although the electorate would like to commit to a retrospective voting rule to motivate self-interested politicians optimally, when it comes time to vote it makes sense for the electorate to focus *completely* on the question of type: which candidate is more likely to be principled and share the public's preferences? The simple logic behind this result may help explain the empirical observation that voters tend to think about elections in terms of choosing a good type.

Elections with No Expectation of Accountability

There is no logical reason why elections must be understood as a part of a relationship of accountability or "agency." For example, a group of people might understand elections as a means of selecting or conferring honor on the best or most distinguished person. This sort of understanding can take two forms, one connected with conferring or recognizing honor without any

instrumental purpose, and one concerned with selecting the best person with a notion that this person will of her own accord do what is best for the voters.

Thus, in the first case, the voters have no expectation whatsoever that the elected official has a responsibility to act on behalf of the electorate (thus violating the first condition necessary for a relationship to entail accountability). The election might be understood simply as a declaration of who in the group most deserves the honor of political authority. As a logical claim this is simply true. Empirically, Mark Kishlansky's (1986) account of parliamentary elections in early modern England suggests that something like this actually occurred, and Max Weber (1978: 1112–30) had earlier claimed that premodern elections were about the acclamation and recognition of charisma, rather than the selection of a delegate or agent. Echoes of this view can also be found in the "Michigan model" of elections, which sees votes as affirmations of warm feelings for a candidate (Campbell et al. 1960).

In the second case, the voters choose with an eye toward whether the elected official would act on their behalf, but still have *no* expectation that the anticipation of future elections was a device for giving the elected official an incentive to do so (thus violating the second condition). Imagine, for instance, a system in which elected officials can serve only one term in office, so elections cannot serve as a sanctioning device to induce good performance by those elected. But if the voters think they are able to distinguish among types of candidates and that some types are more inclined to act of their own accord in the public interest, then they could still understand the elections as the fundamental mechanism of democratic governance.

Lack of Electoral Accountability Need Not Imply Lack of Responsiveness

This second case suffices to show that lack of electoral accountability need not imply public policy opposed to voter preferences. Imagine again the system in which elected officials can serve only one term in office, and thus are not accountable since they cannot be sanctioned at the polls.[2] Such a system could

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[2] Of course, they may still be accountable before the law for criminal and civil violations, as is everyone else.

still, in principle, produce public policy in accord with what the voters would want, if the voters are able to distinguish candidates who are simply the *type* who want to do in office what they would want done. Define a good type for a particular voter as a politician who (1) shares the voter's issue preferences, (2) has integrity, in that he or she is hard to bribe or otherwise induce to work against the voter's interests, and (3) is competent or skilled in discerning and implementing optimal policies for the voter. If voters are able to distinguish politicians along these three dimensions, then this lack of accountability need not imply that the public will not get what it wants. The conclusion: *Electoral accountability is not in principle necessary for elections to produce responsive public policy.*[3]

How might voters distinguish between good and bad types? Voters have available a variety of signals and measures, which might be partitioned as follows:

1. General measures of the voter's welfare ("Am I better off than I was four years ago?") or of the health of the economy or society (the "misery index," the crime rate, etc.) that might allow inferences about the types of incumbent politicians.
2. More specific measures of "pork" delivered, policies chosen, or votes cast by incumbent representatives in prior terms in office; party affiliation and location within the party.
3. Information about the personal character of a politician, derivable from all manner of sources, such as life history as reported by the media or the candidate, impressions of how the candidate speaks, body language, sense of humor, involvement in scandals, and group affiliations of the candidate.
4. Policies advocated by the candidate or incumbent in campaign or other political speeches.

Note that this list includes both "prospective" measures such as campaign platforms and "retrospective" measures such as how the economy performed under an incumbent. If people are trying to select good types more than sanctioning to induce good behavior

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[3] I mean "responsive" either in the weak sense of Stokes (i.e., preferred by some majority) or something stronger (see Stokes, Chapter 3 in this volume). In the public choice literature on what determines how representatives vote on bills in Congress, John Lott (1987) has argued similarly that voters are able to "sort out" officials with similar policy preferences and thus generate outcomes they like.

in the future, then both retrospective and prospective information may be relevant to their decisions, even if it is noisy and often interpreted badly. (By contrast, only retrospective measures are informative in a pure sanctioning view of elections, since promises about future performance are not credible. Voters trying to select good types from campaign speeches face the problem of noisy and misleading signals, but informative signaling is not a priori impossible.)

How Do Voters Think about the Point of Elections?

That voters might understand elections in terms of selection rather than sanctioning is more than an abstract, theoretical point. This conception – elections as a means of selecting the type of leader who will act competently and faithfully in the public interest, independent of reelection incentives – is arguably much closer to the popular understanding in the United States (and probably other democracies as well) than is the understanding that thinks of future elections as a sanctioning device to induce appropriate behavior during an elected official's present term. We can see this by considering how the "elections as selecting a good type" perspective makes sense of a number of striking facts about public opinion and elections in the United States that are perplexing if one adopts an "elections as mechanisms of accountability" view.

Dislike of "Office Seekers"

First, notice that reelection-seeking behavior by politicians is generally regarded with disdain and contempt. People widely and often bitterly deplore the fact that politicians "just want to get reelected!" If one has the view that it is precisely the prospect of reelection that induces politicians to do what voters want, then the trait of cravenly desiring reelection should be highly *valued*, not disdained. We should want to elect those people most desirous of holding office for a long time, because they would be the most inclined to do exactly what we want in order to get reelected and least inclined to risk getting booted by engaging in illicit rent seeking. Note that in Ferejohn's (1986) "moral hazard" model of the electoral control of incumbents, electoral

control is easier and more efficient the higher the value of holding office for the incumbent (e.g., how much it pays or how much the person values the status), and the lower the reservation value of the incumbent for not being in office. Among other things, this implies that if we fully believed in the "elections as mechanisms of accountability" model, then we should want to pay politicians very large salaries to reduce their temptation to shirk to a minimum (note that the costs would be spread over an enormous number of taxpayers). But such arguments can hardly be found in the public sphere, possibly in part because paying politicians very large sums would encourage exactly the wrong *types* to run for office – people motivated by financial gain rather than public interest![4]

Term Limits

Second, notice that there is considerable support in the United States for congressional term limits, that the highest office in the United States is subject to a two-term limit, and that a number of Latin American presidents and legislators are allowed to serve for only one term (Carey 1996). These facts would be completely inexplicable if most people subscribed to the "repeated elections as a mechanism of accountability" view. If you believe that the main point of elections is to offer elected officials a future incentive for representative behavior in the present, then how can you possibly support taking away the principal incentive? On the other hand, if most people understand elections as an attempt to choose a good type who will of his or her own accord do what they want, then there need be nothing wrong with term limits. In fact, they could even be a positively good thing, if they would help screen out (through self-selection not to run) craven, opportunistic office seekers, leaving instead candidates more genuinely motivated by

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[4] Another implication of the pure moral hazard model is that we should want to elect relatively poor people who have a high value for holding onto the office. But in the United States, at least, personal wealth is rarely a political liability, and rich candidates are not discounted on the grounds that they will shirk because they won't care if they lose office. In defense of the moral hazard view, rich politicians might be less likely to shirk to gain monetary rents since their marginal utility for money is likely to be less than their value for office status ("he's so rich he can't be bought").

the desire for public service.[5] Finally, note that the argument *against* term limits that seems to be the most compelling to the U.S. public is definitely not that term limits would make politicians unaccountable, but rather that term limits arbitrarily restrict the free choice of who can be one's representative. They are said to be "undemocratic" for this reason.[6]

The Premium on Principles and Consistency

Third, notice that voters generally put a high value on principledness and consistency in candidates and elected officials, even to the point of being willing of forgive some extremism in policy positions if they believe this can be taken as an indication of these qualities. Thus, many people who would have preferred less conservative policies than Reagan espoused nonetheless appear to have been won over by the sense that he was a man of principle and that they "knew where he stood."[7] Further, notice how politicians can face very significant criticism and loss of support if they change a publicly stated position on a contentious issue. This is true even if

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[5] Regarding members of legislatures, there is an argument against term limits on the grounds that if they are too short, the elected officials will not be able to develop the expertise necessary to allow them to hold their own against permanent staff bureaucrats or lobbying interests. But this argues against having short term limits on representatives, rather than for no term limits at all. Regarding presidents in new democracies, there are some other strong arguments in favor of term limits: First, if you can't run for reelection, then you can't use the powers of office to engage in electoral fraud on your own behalf (though you may still be able to commit fraud on behalf of your party). Second, if you know that you will be out of office in (say) six years, then you have to worry more about being prosecuted once out of office for illegal activity you engage in while in office, and the fear of this may then keep you more honest and public-minded while in your one term. Paradoxically, then, term limits for the highest executive office may actually favor democracy, its continuation, and its responsiveness.

[6] There is also the more academic, coordination-problem argument about not wanting to handicap one's own representatives with term limits when other states still do not have them, due to loss of seniority in the legislature (Dick and Lott 1993; McKelvey and Riezman 1992). This has nothing to do with term limits lowering electoral accountability, however.

[7] To some extent, in the 1996 Republican primary campaign Pat Buchanan tried the same tactic pushed farther. He has espoused and stuck to extreme positions in the face of a critical reception and electoral failures, in part because this signals that he is a "man of principle" who really believes that what he is recommending even if

they change a previously stated position in the direction of what the public seems to want now! "Waffling" is considered a bad thing, even if one waffles toward the median voter.

Again, these facts would make no sense if people thought of elections as mechanisms of accountability. If I think of elections as incentive systems pushing politicians to do what I want, then I should be *happy and approving* when a politician changes position to be more in accord with my views (assuming that I am close to the median, or whatever it is that "the public wants").[8] And if I want elections to induce politicians to do what is in the public interest, I should be upset with candidates and elected officials who espouse or implement policies not thought by a majority to be in the public interest (i.e., extremist policies or policies away from what the median voter wants or thinks best). I should not approve of them for their principled but unpopular stands. By contrast, if I think of elections as a problem of choosing a competent, like-minded type not easily bought by special interests, then it makes perfect sense to be highly concerned with principledness and consistency. Sticking by a position through thick and thin is a *costly signal*, since types who are just office seekers and are easily bought will find consistency and principledness more difficult to manage.

Last-Period Effects

Fourth, if the anticipation of future reelection were the principal factor inducing politicians to vote the way their constituents would want rather than for powerful special interests, we would expect to see systematic changes in representatives' behavior in their last term in office (when they know they will step down due to retirement or a term limit). In other words, we would expect to observe significant *last-period effects*. In addition, if

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is best for the country. This line of analysis may suggest an explanation for why we tend to see the rise of policy extremists in periods of low trust in government and politicians – in such times, the public's premium on candidates who appear principled and consistent goes up, and this may favor extremists.

[8] The point is not that people never approve of elected officials shifting policy positions in their preferred direction, but that the common reaction of disdain for inconsistency does not make sense from a purely "elections as mechanisms of accountability" point of view.

voters in fact saw the reelection incentive as the principal way that elections encourage public policies they desire, then they would be very reluctant to elect a politician for a term known to be his or her last.[9]

Neither casual empiricism nor more careful empirical studies reveal strong or obvious evidence for these implications. Regarding casual empiricism, I have never heard anyone claim that U.S. presidential shirking on policy or effort goes up markedly in the second term.[10] And voters are clearly willing to reelect presidents for second terms, and sometimes reelect representatives who are thought very likely to be retiring or moving on.[11]

Regarding more-careful empirical studies, there is a large literature on the question of how much U.S. senators and representatives vote against their constituents' preferences, including several studies of voting behavior in the last term (by representatives who do not die in office).[12] With a few exceptions, these

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[9] In formal models of elections as a pure moral hazard problem (Barro 1973; Ferejohn 1986), a commonly known last period can cause "unraveling" to occur: anticipating that the incumbent will shirk in her last period, voters would not reelect, but this gives the incumbent an incentive to shirk in the next to last period, which leads voters not to reelect for this period, and so on – the end result being that the politicians are completely unconstrained. Just as in the chain store paradox, this unraveling need not occur if there is lack of common knowledge about which is the representative's last term, even if it is common knowledge that the representative will eventually die or retire. Thus, Bender and Lott's (1996: 82) claim that unraveling is a theoretical implication of politicians' mortality is too strong.

[10] One might argue that for presidents the "judgment of history" is the relevant sanctioning mechanism in the second term, but of course this is quite different from the electoral mechanism. During the 1996 campaign it was sometimes said by liberals that in the second term "we will see the real [more liberal] Clinton" – that is, that he would shirk, ideologically, against the center. This appears to have been wishful thinking.

[11] While one might argue that voters reelect retiring representatives because seniority gives them special powers in Congress, if voters thought reelection incentives were the sole guarantee of good behavior then they would not expect seniority powers to be used on their behalf in a representative's last period.

[12] For a recent review of the literature on "ideological shirking," see Bender and Lott 1996. For studies looking for last-period effects, see Carey 1996; Lott 1987; Lott and Bronars 1993; Kalt and Zupan 1990; Van Beek 1991; Zupan 1990.

studies find no evidence that representatives change their voting behavior systematically in their last term, although they do vote significantly less often (Lott 1987; Lott and Bronars 1993; Van Beek 1991).[13]

This bit of evidence is of a different order from most of the previous examples. The previous examples generally concerned the beliefs and attitudes of the public, which might be justified or not. This fact, if true, could suggest that people actually *are* able to choose "good types" who have similar policy preferences and who are not so easily bought. For this reason it is worth taking a slightly closer look at this literature.

If we assume it is correct, there are three possible explanations for the fact that representatives in their (known) last term do not change their voting behavior as compared with their previous records. First, it could be that the electorate is able to sort out good types with similar issue preferences, as suggested here and by Lott (1987). Second, it could be that representatives are *never* much constrained by the electorate, so that they vote their ideological preferences all the time, last period or not. Third, in principle it might be that representatives will lose some reputational "bond" if they "cheat" in the last period (Barro 1973), such as prospects for higher office, party-guaranteed pensions, or political career prospects for their children.

The evidence from the literature on congressional voting seems to favor the first explanation, although more could be done to rule out the second. For the third, there are simply not enough plausible "bonds" available to explain the result for retiring congressmen, and those present for some politicians (children's career prospects in politics, aspirations to higher office) seem to have little effect anyway.[14] Regarding the second possible explanation, there seems to be no doubt that, when voting, representatives put some weight on constituent interests as opposed to personal, party leadership, or special interest preferences. The

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[13] The major exception is Zupan 1990, which is credibly criticized by Lott and Bronars 1993.

[14] Lott 1990; Van Beek 1991. See Carey 1996 for a careful analysis that finds that aspirants to statewide office systematically alter their last period congressional voting in the direction of the state party delegation, which controls nominations. As Carey notes, however, too few congressmen run for higher office for this to explain the general result concerning the absence of a last-period effect.

amount of the weight is hard to estimate.[15] In an innovative essay, Levitt (1996) uses the voting records of a state's House delegation to estimate constituent interests for senators from that state and finds that senators put three to six times less weight on constituent preferences in voting than they do on "personal ideology" (where this should be understood as personal and probably interest-group preferences). The variation – from three to six times less weight – depends on whether one considers only the influence of the state's median voter, or also those voters in the senator's "support constituency," which essentially means voters of the same party. While Levitt's technique seems a big improvement on earlier methods (Kalt and Zupan 1994), the nagging suspicion remains that constituent interests are not adequately estimated, so that the senator-specific effects may contain unmeasured constituent interests. For one thing, in Levitt as in most other studies, the votes used to measure a senator's position are the same for all senators, so that no account is taken of the fact that politicians almost surely put more weight on constituent interests on issues that their constituents care a lot about. Brady and Schwartz's (1995) study of the effect of positions on abortion on election prospects and voting in the Senate tends to support this view.[16]

Levitt's and other evidence in this literature would seem to suggest the following points relevant to this chapter. First, there is no doubt that U.S. congressmen "shirk" to some degree in their voting on bills, in the sense that they do not mirror the ideological preferences of their geographical constituencies (whom they are normatively bound to represent).[17] Nor, it seems, do they perfectly

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[15] See Kalt and Zupan 1994 and the several critiques of their methodology in *Public Choice* 76 (June 1993). As Bender and Lott (1996: 78) observe, the hypothesis that politicians shirk completely in every period is inconsistent with the finding that in their last term they vote significantly less often (Lott 1987).

[16] Another problem with Levitt's and Kalt and Zupan's approaches is that, in both, average ideological shirking across senators is effectively constrained to be zero, so that systematic bias introduced by, say, the greater power of business lobbies, cannot be estimated. See Bender and Lott 1996 for this point with respect to the Kalt and Zupan methodology. In Levitt, the problem arises from the assumption that the average ideological position of a state's House delegation is an unbiased estimate of voter ideological preferences in the state.

[17] Authors in this literature often bemoan the following problem. What counts as "shirking" depends on which constituency (geographic, electoral, interest group?) representatives are representing, and theory does not tell us which is

mirror the ideological preferences of their "electoral support" constituencies, although the extent of the average deviation is unclear. Second, diverse evidence suggests that the threat of electoral sanctioning does matter. For example, Levitt (1996: 436–38) finds that senators give twice as much weight to (median) constituent preferences in the year before elections as compared to four years or more before elections. He also finds that senators in marginal seats put considerably more weight on constituent preferences than do senators in safe seats.[18]

Third, it nonetheless appears that voters are to some extent able to use elections to select politicians who have roughly similar issue preferences. Otherwise, it is hard to explain the absence of strong last-period effects coupled with the fact that representatives' voting does reflect constituent preferences to a non-negligible degree. In addition, some studies provide more-direct empirical evidence of electoral sorting – politicians who deviate more from their constituents' preferences are more likely to lose reelection bids (Lott and Davis 1992; Lott and Bronars 1993; Wright 1993; Brady and Schwartz 1995; Levitt 1996: 437n23). It appears, then, that both mechanisms of electoral control – selection and sanctioning – operate to some degree, although if Levitt (1996) is correct, there remains considerable "slack" in the electoral agency relationship.

How Should Elections Be Understood?

Are people wrong to think about elections primarily in terms of choosing a good type rather than as mechanisms of accountability? Are they mistaken to disdain reelection-seeking politicians, to support term limits, and to put so much emphasis

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the right one (e.g., Bender and Lott 1996; Poole and Romer 1993). From a normative perspective, however, it seems to me that the issue is clear. Representatives are normatively bound to represent their *geographic* constituencies, and not just the people who voted for them. Thus a representative who votes in accord with the median of her supporters rather than the median of the district is shirking or the median voter in the district has mistaken what is really in his own interests.

[18] There is abundant evidence that U.S. representatives are powerfully motivated by the desire for reelection, and that in consequence they pursue at least some activities that their constituents desire (e.g., Mayhew 1974; Cain, Ferejohn, and Fiorina 1987).

on principledness, consistency, and the character of candidates and elected officials?

These attitudes and beliefs make perfect sense if people also believe that (1) repeated elections do not work well as a mechanism of accountability, because they believe that their ability to observe what politicians do and to interpret whether it is in the public interest is so negligible; and (2) there actually is relevant variation in types of candidates for political office, and these can be distinguished to some extent, either by campaigns or observed performance in office. This is not to say people would be *justified* in having these beliefs – that requires saying whether the beliefs are correct. But neither belief is crazy on the face of it.

Consider the second belief – that a range of types exists and can be distinguished to some extent. A "good type" for a given voter means a candidate with similar policy preferences, who is relatively honest and principled (hard to buy off), and who is skilled. Certainly candidates vary in their policy preferences and general competence, and almost surely they vary in principledness and integrity. *Any* variation in types in this sense, and *any* ability to distinguish them through campaigns or performance in office, would make it reasonable for voters to think about elections at least in part as exercises in sorting among types, independent of a relationship of accountability. The more difficult it is to distinguish types, the more fallible the sorting process – and everyone believes it is highly fallible, since everyone believes there are many corrupt and incompetent politicians. But this need not make it any less rational to try to sort on quality in these dimensions, especially if it is true that elections are not very good as mechanisms of accountability.

So now consider the first belief – that repeated elections do not work well as mechanisms of accountability. There can be no doubt that formidable problems are involved in monitoring and evaluating incumbent behavior to make informed judgments about whether to reelect. Voters face a severe agency problem, because their information about politicians' behavior is inevitably poor and because their sanctioning instrument (reelect/don't reelect) is so crude. Voters have neither the time to follow policy debates in Washington nor the training and skill to evaluate conflicting "expert" arguments about what is best. In any event, elected officials can do an enormous amount of business entirely out of public view. Further, when policy is produced by a legislature, it

is difficult to see how one can hold individual members responsible for it unless one has a detailed empirical and theoretical understanding of legislative procedure and politics (which even full-time students of Congress do not agree on).

Finally, even if the public *could* better observe and interpret what elected officials do, it is not clear that the electoral sanction is a subtle enough instrument to induce politicians to do what the public wants.[19] For example, because policy is typically multidimensional, elected officials may be able to play one coalition against another in electoral politics, staying in office while pursuing policies that no majority prefers to available alternatives (Dewatripont and Roland 1992; Ferejohn 1986).

Given the difficulty of the agency problem voters face, then, it might be entirely reasonable to imagine that the best available solution is to try to elect good types of candidates, and to view repeated elections as repeated opportunities to *sort among types* rather than as mechanisms for controlling problems of moral hazard for elected officials. In this view, one votes against an incumbent if economic or other circumstances are bad not in order to give the new officeholder an incentive to work harder or more responsibly, but rather just to try a new random "draw" from the pool of types. In economic jargon, elections may be more about an adverse selection problem – sorting good from bad types that want to mimic them – than about controlling moral hazard.

This perspective has been given a formal statement by Banks and Sundaram (1990), who analyze repeated elections as a species of "bandit problem" from statistics.[20] A voter chooses each period between an incumbent and a challenger, where all candidates are

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[19] Maravall (Chapter 5 in this volume) provides some dramatic examples of how politicians can exploit the crudeness of the sanctioning mechanism. Why, then, do we use this simplistic incentive scheme for political offices? Why not tie presidential pay to GNP growth (or some weighted average of measures of welfare), as a *Saturday Night Live* skit had Ross Perot suggesting during the 1992 race? This sounds ridiculous, but it is interesting to try to spell out exactly why. Holmstrom and Milgrom (1991) point out that if a job involves many tasks that vary in how easily they can be monitored and evaluated for performance, then making compensation contingent on performance for the most monitorable tasks will suboptimally direct activity away from the less monitorable tasks. Since politicians' jobs involve many tasks and responsibilities that vary in their ease of monitoring, this argument would seem quite relevant.

[20] See also Rogoff and Sibert 1988; Rogoff 1990. For informal discussions, see Lott 1987; Ferejohn 1993.

characterized by an unobserved "competence level." The voter observes her welfare each period, which is the incumbent's competence level plus a stochastic error term. The question is when to dump the present incumbent for a return to the pool of challengers. With two candidates, optimal behavior involves a myopic decision rule where the voter dumps the incumbent if performance falls below a certain level. This is retrospective voting, but it is aimed solely at finding a good type rather than at giving politicians incentives not to shirk in office.

Note that under this conception of elections as pure selection problem, the voter may well want to be able to reelect the same person over and over (i.e., not to have term limits), but the reason has nothing to do with electoral accountability. Rather, voters simply want the option of "keeping good ones." This fits nicely with what seems to be the most popularly convincing argument against term limits, which sees them as restricting democratic choice – "if you have a good representative, why force him or her out?"

The Interaction of Selection and Sanctioning

In the preceding section, I suggested that if voters' ability to monitor politicians' behavior in office is very poor, they might reasonably focus on trying to select good types, even if politicians vary little in desired qualities. This is a claim about what would constitute rational behavior in a particular situation, and it could be wrong or in need of major qualification. For example, it could be that the inability to monitor politicians also effectively undermines the ability to sort among types. Or it could be that a small amount of variation in politicians' types would rationally have only a very small effect on voter behavior.

One way to investigate and assess claims about what would constitute rational behavior is to consider a simple game-theoretic model of the situation, which I develop next. While neither the model nor its results should be taken too literally, it proves useful for a further purpose as well.

Thus far, I have described two ways that elections might bring about a correspondence between public policy and what the public desires. Elections might work either as a sanctioning device that induces politicians to choose in the public interest so they can retain their jobs, or as a selection device that allows the public to choose leaders who will, of their own accord, do what the public

wants.[21] Of course, as the empirical literature cited earlier suggests, there is no reason to think that only one of these mechanisms operates. Even if people tend to think about elections as selection devices, *selection can imply sanctioning and vice versa*. If people try to select good types at the polls, then this can imply that bad behavior is electorally sanctioned and thus that bad types have an incentive to mimic the behavior of good types. But this mimicry might in turn reduce the ability to select.

Clearly, then, selection and sanctioning interact. A simple game-theoretic model is also valuable for analyzing the nature of this interaction. I next consider three variants of a model in which an incumbent politician chooses a policy, and then the electorate, uninformed about the policy but informed about its overall welfare, chooses whether to retain the incumbent. The first two variants depict in stark terms the cases of elections as a pure selection device and elections as a pure sanctioning mechanism. The third variant combines selection and sanctioning. Technical details are confined to an appendix.

I will consider three variants of a simple two-period game between two players, the electorate (or median voter), E, and an incumbent politician, I. For all three variants, the sequence of events is the same.[22]

1. The incumbent chooses a policy, represented as a real number x. (In the pure selection case, the incumbent simply implements a given policy rather than making a strategic choice.)
2. The electorate does not observe the policy chosen, but does observe a measure of its welfare that depends partly on the policy x and partly on random factors. The observed measure of welfare is $z = -x^2 + \varepsilon$, where $-x^2$ is the electorate's utility for the policy x and ε is a random variable drawn from a symmetric, strictly unimodal probability density function f with mean zero. Thus, the

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[21] This distinction is implicit in the small formal literature on electoral control under the heading of moral hazard versus adverse selection (see Banks and Sundaram 1993, 1996; Ferejohn 1993). In the public choice literature on "ideological shirking" (e.g., Kalt and Zupan 1984), Bender and Lott (1996: 75) label the selection view the "ideology-ensuring-performance hypothesis."

[22] The model both draws on and tries to extend the small formal literature on the electoral control of politicians. See in particular Austen-Smith and Banks 1989; Banks and Sundaram 1990, 1993, 1996; Ferejohn 1986; Harrington 1993a, 1993b; Larocca 1997; Reed 1994; and Zielinski 1997.

electorate's ideal policy choice is $x = 0$, but the electorate cannot tell exactly what the government did because x is not directly observed and the electorate's welfare level z is a noisy measure of x.[23]

3. After observing its welfare level z in the first period, the electorate chooses whether to reelect the incumbent or to draw a new officeholder from a "pool" of aspiring politicians.

4. The second period begins, with the new or old incumbent choosing a policy y, and the electorate receiving utility $-y^2 + \varepsilon'$, where ε' is another draw from the density f. The game then ends. (From the viewpoint of the first period, all second-period payoffs are discounted by a common factor $\delta \in (0, 1)$.)

A strategy for the electorate will be a rule saying whether to reelect the incumbent as a function of its observed first-period welfare, z. Intuition suggests that a sensible rule for the electorate would take the form of a *performance criterion* of "cut rule." For example, "reelect if welfare is at least as great as the level k, and elect a new incumbent otherwise." In fact, for each of the three variants of the model, the optimal rule for the electorate takes this form, which looks like "retrospective voting" in the sense that Fiorina (1981) and others have argued is typical of how voters decide in practice.[24] Of course, if voters are rationally seeking to influence their future welfare with their votes, then their retrospective judgment has a prospective purpose. The question then arises of how to choose the performance criterion k to best motivate or select politicians in the future. I proceed to consider this problem for the three variants in turn.

Pure Selection

In the case of elections as a pure selection problem, candidates vary in their level of competence or skill at producing outcomes the electorate likes.[25] For simplicity, suppose there are two types – good ones, who are both able and willing to implement the

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[23] The case where the electorate observes a noisy measure of the policy chosen ($z = x + \varepsilon$) yields qualitatively similar results.

[24] I do not demonstrate this here. See Banks and Sundaram 1996 for a proof of the optimality of a simple cut rule in a similar model.

[25] As in Rogoff 1990; Banks and Sundaram 1990.

electorate's optimal policy $x = 0$, and bad ones, who can at best implement a suboptimal policy $\hat{x} > 0$. Thus, good types are expected to produce a welfare level of zero on average, while bad types produce $-\hat{x}^2$ on average. Assume further that in the "pool" of aspiring politicians, a fraction $\alpha \in (0, 1)$ are good types and $1 - \alpha$ are bad types, and that the first-period incumbent was initially drawn from this pool (e.g., in an open-seat race).

So in this case of pure selection, the electorate faces the decision-theoretic problem of drawing an inference about the incumbent's competence from its observed welfare level z, and then reelecting if the updated belief that the incumbent is good is higher than α, the probability that a new incumbent would be a good type. This is a simple matter of applying Bayes's rule. In the appendix, I show that when the distribution of "noise" f is symmetric and unimodal, the electorate increases its estimate that the incumbent is competent if it observes welfare z greater than $k = -\hat{x}^2/2$, which is the outcome halfway between the expected performance of competent and incompetent types. Thus, $k = -\hat{x}^2/2$ is the retrospective performance criterion in this case. If not attained, the incumbent is dumped.

Two interesting comparative statics results follow. First, the better the expected performance of the less competent type (the smaller $\hat{x}$), the *more demanding* is the optimal performance criterion (k rises as $\hat{x}$ falls). For example, suppose that competent types are expected to produce noninflationary growth of (on average) 2%, while incompetent types are expected to produce 0%. Then a rational electorate infers the incumbent is more likely to be a competent type than a new draw would be if it observes growth of at least 1%. However, if an incompetent type is expected to produce growth of 1% on average, then the electorate's performance criterion rises to 1.5%. Intuitively, the more the bad type's expected performance resembles the good type's, the higher the performance needed to increase the electorate's estimate of competence. This observation will prove important later, in the analysis of the mixed case.

Second, making it harder for the electorate to monitor the incumbent's behavior (i.e., increasing the variance of the noise ε) has no effect on the optimal-performance criterion (k is independent of the density function f). However, worse monitoring does make it harder for the electorate to select good types. The probability that a good type is reelected is the probability that

$z > k$, or $1 - F(k)$; the likelihood that a bad type is reelected is the probability that $z = -\hat{x}^2 + \varepsilon > k$, or $1 - F(\hat{x}^2 + k)$. As the variance of the noise term ε increases, both these terms approach 1/2, so that good and bad types are almost equally likely to be reelected. As monitoring improves, by contrast, the probability that a good type is reelected eventually approaches 1 and the probability that a bad type is reelected approaches 0.[26]

Pure Sanctioning (Moral Hazard)

In the case of elections understood purely as mechanisms of accountability, all politicians are the same type. They are all venal, or have policy preferences distinct from the electorate's. Assume, for example, that the incumbent and all aspiring politicians in the model maximize their own utility in a given term in office by choosing $x = 1$. This might arise either because the politicians are systematically more ideologically extreme than the median voter, or because wealthy special interests offer venal politicians various benefits for choosing policies the median voter dislikes.

In particular, for the model, assume that an incumbent's utility is given by $W - (1 - x)^2$ in the first period and $W - (1 - y)^2$ in the second. $W > 0$ is a politician's value for office independent of policies chosen, which presumably includes pay and perquisites but, for national office, is probably mainly a status value – "ego rents," as Rogoff and Sibert (1988) put it.[27] Because the second period is the last, politicians maximize utility in the second period by setting $y = 1$, which yields them W. For the first term in office, however, an incumbent has to consider the effect of the policy choice on the probability of being reelected, which depends in turn on the performance criterion set by the electorate.

[26] Here and elsewhere, when I equate the quality of monitoring with the variance of ε, I mean variance parameterized as in the case of standard bell-shaped curves like the normal and logistic distributions. There are in principle an infinite number of ways to increase the variance of a distribution, and for some peculiar ways (e.g., readjusting probability weight only in the tails), some of the claims given in the text would be weakened.

[27] As is typical in this literature, I will assume W to be exogenous, even though W can presumably be manipulated through salary choice by the principal. For a variety of reasons (some of them worth exploring), representatives' pay is not much used for incentive purposes.

In this case of pure sanctioning, it is important to see that *any performance criterion set by the electorate is credible*, in the sense that the electorate is willing to reelect or not according to any criterion. Because in this case all politicians are alike (somewhat bad), the electorate is always indifferent between keeping and dumping the incumbent, since it gets the same second-period outcome ($y = 1$) either way.[28] And because the electorate is always indifferent between candidates, the electorate can choose the performance criterion to motivate the incumbent optimally and have it be credible that this criterion will in fact be employed. As I show later for the mixed case, introducing even a tiny possibility of variation in politicians' types radically changes this – if politicians vary in policy preferences, even a little, then voters are no longer generically indifferent between the incumbent and possible replacements.

What, then, is the performance criterion that will motivate the incumbent to choose a policy as close as possible to the electorate's ideal of $x = 0$? At first glance, one might think that the higher the electorate sets the standard, the greater the incentive for the incumbent to choose a policy in the public's interest. This is mistaken, however. If the electorate holds incumbents to too high a standard for reelection, then, since reelection is relatively unlikely anyway, politicians have an incentive to shirk a lot – the marginal impact of shirking on the (low) probability of reelection is small. Similarly, if the electorate sets a low threshold for reelection that is easily obtained, then incumbents have an incentive to shirk substantially. As shown in the appendix, the optimal cut rule k^* is chosen to maximize the sensitivity of the likelihood of reelection to shirking by the incumbent.

This basic moral hazard model produces a natural comparative statics result concerning the public's ability to monitor: the worse the electorate's ability to monitor (the greater the variance of ε), the worse the electorate does in terms of policy (the incumbent chooses an x closer to 1). Worse monitoring implies that a given

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[28] This point is also stressed by Austen-Smith and Banks 1989, who consider a similar two-period model with moral hazard. It does not seem to be entirely an artifact of having only two periods, however. Voter indifference between candidates obtains as well in the infinitely repeated case of this model with no term limits, which I have examined, and in the case presented by Ferejohn (1986), who considers an infinite horizon model where incumbents observe their randomly fluctuating marginal cost before they choose "effort" each period.

amount of shirking has a smaller effect on the incumbent's probability of reelection, which reduces the force of the electoral sanction. Conversely, as monitoring approaches perfection (the variance of ε shrinks towards 0), the incumbent's policy choice approaches the voter's ideal point, $x = 0$.[29]

The Mixed Case: Selection and Sanctioning

As I argued earlier, a number of empirical observations suggest that voters think about elections more in terms of selection than as sanctioning mechanisms to influence future incumbents. The pure moral hazard model just presented (and likewise, that of Ferejohn 1986) allows no place for variation in politicians' motivations and dispositions, and so cannot capture this dimension of democratic governance that seems to loom large in the minds of voters. While perhaps better, the pure selection model is also crucially deficient. Surely voters do think that some politicians are intrinsically more capable or competent at producing good outcomes than others, and voters are interested in sorting out the relatively competent ones. But everyone recognizes that politicians make important policy *choices* while in office that are not well monitored by the electorate. Thus Ferejohn and others are absolutely right to say that the voter-politician relationship involves moral hazard in a central way. A theoretical model that captures the voter's decision problem simply but usefully must combine the elements of adverse selection and moral hazard.

There are numerous ways that selection and sanctioning might be combined in a game model,[30] in part because there are at least

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[29] Interestingly, as monitoring worsens, the electorate's optimal-performance criterion becomes *less* demanding. I have analyzed the infinite horizon version of the pure sanctioning model, and the result appears to obtain there as well, at least for normally distributed noise. While in the two-period case the probability of reelection is always 1/2, in the infinite horizon case it can either increase or decrease as monitoring worsens (and it is typically well above 1/2).

[30] Banks and Sundaram 1993, 1996 are the only fully game-theoretic election models I know of that incorporate both elements; see the appendix for a discussion of relevant differences. Reed (1994) claims to consider moral hazard and adverse selection, but in his model the voters observe the policies implemented perfectly, so there is no moral hazard in the usual sense of "hidden actions." Reed's analysis is also incomplete or incorrect, as discussed in the appendix.

three dimensions along which good and bad types can differ: policy preferences, integrity, and intrinsic ability or competence. I will consider a simple formulation that builds on the games just considered, and in which good and bad politicians differ with respect to policy preferences.[31]

Suppose that everything is the same as in the pure sanctioning case described earlier, except that now all politicians initially have an $\alpha \in (0, 1)$ chance of being a "good type," which will mean a politician with the same policy preferences as the electorate (i.e., quadratic with the ideal point at $x = 0$, so that a good type's one-period utility function in office is $W - x^2$). The electorate now might have an incentive to try to sort out good types rather than just optimally motivate bad types. In fact, as argued informally here and formally in the appendix, even if there is only a *tiny* chance of finding a good type (α close to zero), it makes sense for the electorate to focus *completely* on the problem of selection when casting its vote! And, ironically, this is true even though the rationality of trying to select on type at the polls can undermine the efficacy of elections as mechanisms of accountability.

That it makes sense for the electorate to focus entirely on the problem of selection at election time is easy to see. Since the second-period behavior of all bad types will be the same (they all choose $y = 1$), at the polls the electorate maximizes its utility by choosing the candidate most likely to be a good type (who would choose $y = 0$). This holds even if the probability of drawing a good type from the pool of aspiring politicians, α, is negligible.

There is an important substantive point here that is probably more general than this simple model. If politicians do not vary in type, as presumed by the pure sanctioning view of elections, then voters are completely indifferent between candidates – all politicians will respond the same way to any given set of electoral incentives. But this indifference is fragile. Introduce *any* variation in politicians' attributes or propensities relevant to their per-formance in office, and it makes sense for the electorate to focus *completely* on choosing the best type when it comes time to vote. This result supports and even strengthens the claim made in the previous section, that it would be rational for voters to try to sort

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[31] Depending on how we interpret what gives rise to the politicians' preferences, types in the model may also be seen as differing in integrity.

good from bad types of politicians even if there is in fact little variation or it is difficult to discern.[32]

In the model, the fact that the electorate rationally focuses on type at election time has an additional consequence of interest. Namely, the performance criterion that would be optimal ex ante for motivating bad types of politician is generally not optimal (and thus not credible) ex post, for the purpose of selecting good types. The electorate could minimize shirking by bad types by committing in advance to use the cut rule k that maximizes the marginal impact of shirking on the bad type's probability of reelection, as in the pure sanctioning case analyzed earlier. But here's the rub: the more effective this performance rule is in motivating a bad type of incumbent to choose a policy close to $x = 0$, the smaller the practical difference between good and bad types, which makes selection harder. As shown for the pure selection case, the more that bad types choose public-spirited policies, the *better* the performance the electorate will need to see to conclude that the incumbent is likely enough to be a good type to be worth reelecting.

Thus, the more bad types are expected to try to appear good (i.e., the less they shirk the public interest), *the higher the performance standard they will be held to after the fact*. And choosing policies more in line with what the public desires will not necessarily increase one's odds of reelection if the public responds by demanding a better performance in order to reelect.

This result suggests, then, a possible problem with elections as a mechanism of accountability. The problem is that the electorate cannot commit to keep its standards for reelection constant. If there is variation in politicians' policy preferences, then the more incumbents serve public rather than special interests, the higher the performance level the electorate will demand for reelection,

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[32] It is hypothetically possible that in a model with more than two periods, there might be equilibria in which the electorate can commit to keep incumbents thought less good than a new draw would be because failure to do so would lead to "punishment" by future incumbents. This seems intuitively farfetched, in part because such a scheme would probably not be renegotiation-proof – if later incumbents were made worse off by punishing the electorate, they would have an incentive to renegotiate to the original terms. Banks and Sundaram's (1993) model uses a trigger-strategy punishment by the politicians, but to encourage the electorate to drop incumbents if "rewards" fall below a certain level rather than to keep them.

which may undermine politicians' incentives not to shirk in the first place. The result can be a sort of "trap" that makes both sides worse off. I show in the appendix that if the proportion of good politicians is not too large (typically, no more than about 1/2), then voters would be strictly better off if they could commit in advance to use the performance criterion that optimally motivates bad types.[33]

It can also be shown that because of this commitment problem for the electorate, bad incumbents shirk strictly more in the equilibrium of the mixed case than in the case of pure moral hazard, with the amount of the difference being independent of α, the fraction of good types.[34] Ironically, then, introducing a small chance that some politicians are public-spirited can make the public worse off relative to the pure sanctioning case, by undermining the ability to electorally control bad types. (Of course, as the fraction of good types grows, eventually the public is made better off by their presence, despite the increased shirking by bad types.)

I also show in the appendix that, in accord with earlier arguments, as the electorate's ability to monitor becomes very poor, bad incumbents choose their preferred policy (almost) and the electorate's problem approaches pure selection. At the same time, however, worse monitoring lowers the electorate's ability to distinguish good types based on performance, so that the efficacy of selection falls as well.[35] This is not a coincidence – bad types are willing to choose very different policies from good types only if the electorate has a hard time telling the difference between them (i.e., if selection based on performance is not very effective).

There are thus two senses in which it can be reasonable for voters to focus on the problem of selecting good types. First, since bad types are all the same regarding how they will perform for any given set of electoral incentives, the only basis for preferring

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[33] The latter rule is not, however, ex ante optimal for the electorate, because in addition to the sanctioning effect that motivates bad types there is a "selection effect" – the better the performance of bad types in the first period, the harder it is to sort good from bad for the second period.

[34] See the appendix. A perfect Bayesian equilibrium obtains in the model when the incumbent has correct expectations about the performance criterion the electorate will employ, and chooses a policy with this expectation.

[35] In the limit, as the variance of ε grows very large, good types' probability of reelection approaches 1/2 from above and bad types' from below.

one candidate to another at election time is some variation in type (policy preferences, personal rectitude, competence, etc.). Second, if voters have a difficult time monitoring whether incumbents chose policies in their interests, then the electoral sanction will not deter shirking by bad types, leaving electorates the option of sorting them out by performance and other measures, albeit poorly.

Two other results deserve mention. First, how does the efficacy of electoral selection vary with the voters' ability to assess whether politicians are choosing good policies? There are two opposing effects. On the one hand, worse monitoring increases the amount of shirking by bad incumbents, which means that the expected performance of good and bad types diverges. This effect increases the voters' ability to sort good from bad. On the other hand, as monitoring worsens, the probability that a bad type will satisfy the performance criterion (for any given amount of shirking) goes up, which tends to make selection less effective. In numerical analyses of the case of normally distributed noise, I have found that the relationship between monitoring and the efficacy of selection takes the form of an inverted "U." When monitoring is very good, selection is ineffective (although unimportant) because bad types closely mimic good types. When monitoring is very poor, selection is ineffective because bad types frequently meet the performance standard despite their shirking. In between, when voters are moderately able to assess politicians' choices, the difference between good and bad types' odds of reelection is greatest.

The second result, consistent with those of Banks and Sundaram (1996) and Lott and Reed (1989), concerns a cross-section-versus-time-series effect. In equilibrium, all politicians shirk at least as much or more in their second term, due to the last-period effect for bad types. But at the same time, second-term politicians *as a group* may shirk less on average than first-termers, because selection implies that more good types hold office in the second term than the first.[36] Thus time series studies of particular representatives would be expected to find increased "ideological shirking" with greater tenure, while cross-sectional comparisons should find less shirking by longer-serving representatives. The empirical evidence is largely consistent with this prediction,

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[36] The formal condition for the expected second-period policy to be better for the electorate than the expected first-period policy is $F(-k^*) - F(k^*) > (1 - \sqrt{-2k^*})/\alpha$.

although the evidence for increased shirking with greater tenure is slight (for examples, see Kalt and Zupan 1990; Zupan 1990; Levitt 1996).

To summarize, this section has posed two "ideal typical" views of how the electoral control of politicians might work, arguing that a good theory needs to incorporate both and also to consider that the two mechanisms interact. Even if voters focus their attention on the problem of selection – and, as suggested by the model, they can have good reasons for doing so even when selection is difficult – this implies that to some degree elections will act as sanctions establishing an accountability relationship.

Analysis of the model also produced the unexpected finding that the problem of adverse selection in elections can, in principle, worsen the problem of moral hazard. If politicians vary in their policy preferences and integrity, which they surely do, then (rational) voters will be drawn to choose at election time on the basis of beliefs about type, and ironically this imperative may reduce the flexibility of elections as mechanisms of accountability. In essence, the performance criterion that would minimize politicians' incentive to shirk is not credible because at the polls voters would want to apply a higher standard in order to sort good types from bad optimally.

Though of theoretical interest, I suspect that the practical and empirical relevance of this commitment pathology is small, in part due to concern that the model is unusually spare. Moreover, even in the model as it stands, in numerical analyses I have found it almost impossible to generate large welfare losses for the electorate due to the commitment problem.[37] Even though shirking by bad types increases when a chance of good types is introduced, the increase is typically quite small, especially when monitoring is poor but even when monitoring is relatively effective. For example, almost regardless of monitoring ability, the electorate does better in the mixed model than in the pure sanctioning case if at least one in five hundred political aspirants is a good type.[38]

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[37] In these analyses I used a normal distribution for ε; almost surely the claim holds for any bell-shaped distribution.

[38] Some might say that one in five hundred is too optimistic. Also, the simulation results described all assume that politicians' value for office W is at least as great as their value for maximum shirking in a period – that is, $W > 1$. If $\delta W < 1$, .then the commitment problem can cause nontrivial welfare losses.

Conclusion

The main justification for freely contested and regular elections is that these are supposed to bring about democracy, or rule according to the will of people. As the editors note in the volume's introduction, the tradition of democratic theory contains surprisingly little on exactly how elections are supposed to produce this result, or on how well they might be expected to. How, if at all, do elections bring about a correspondence between public policy and what the electorate desires? And under what conditions is the correspondence strong or weak?

The main points of this chapter may be summarized as follows. First, following the small formal literature on electoral control, I have argued that there are *two* principal mechanisms by which elections might bring about public policy that voters desire – sanctioning and selection. Elected officials might be motivated to choose policies the public desires either because this will help get them reelected (sanctioning), or because the electorate is able to select "good types" who are principled, competent, and share the electorate's ends, independent of reelection incentives. This simple point is missed if the voter-politician relationship is understood purely as a relationship of accountability based on the electoral sanction.

Second, I suggested that in fact voters think about elections much more as opportunities to try to select good types than as sanctions to deter shirking by future incumbents. A number of empirical observations support this claim. The popular dislike of office seeking, support for term limits, the premium put on politicians being principled and consistent, and the absence of concern about "last-period effects" all suggest that voters think about elections primarily in terms of selection.

Third, analysis of a simple model of electoral control in which voters face both adverse selection (the problem of distinguishing good from bad) and moral hazard (imperfect monitoring of agents who might shirk) suggested two reasons why it may be reasonable for voters to focus on selecting good types. Once at the polls, the electorate can't commit to ignore type in favor of implementing an ex ante optimal sanctioning scheme – variation in type is what is relevant to voter payoffs at the moment of choice. Also, if the electorate's ability to monitor what politicians do is poor, then the force of the electoral sanction is weak and voters are left with

selection as a (noisy) means of getting the public policies they desire.

Finally, the mechanisms of selection and sanctioning inevitably interact, with consequences for the efficacy of democratic rule. Even if voters focus on selecting good types, this implies accountability, since bad performance in office will be sanctioned when it suggests the incumbent is a bad type. In the model examined here, where voters could only distinguish types of politicians by observing their performance in office, the electorate's ability to monitor determines the interaction between selection and sanctioning. Good monitoring induces bad types to act like good ones, so selection becomes difficult but also less important. Bad monitoring leads bad types to shirk more, which makes selection possible, but also makes it a noisy and fallible enterprise for the voters.[39]

The importance of monitoring for making elections somewhat effective instruments of popular rule in the model accords with common sense (though I hope the strategic logic described provides stronger and more developed foundations for the common sense). Almost surely, politicians are most inclined to choose policies and other actions that the public desires when the probability of exposure for failure to do so is highest. The standard liberal observations about the importance of effective media and an informed, interested public follow immediately.

As Downs (1957) stressed, however, voter's incentives to be interested and well informed about politics are far from strong, a point amply confirmed by empirical studies of what most voters know about politics. The preceding arguments about monitoring, selection, and sanctioning are all based on a model in which people assess politicians' types by looking at noisy measures of their performance in office. As noted earlier, there are other, less attention-intensive ways of trying to assess types. For example,

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[39] As throughout, "monitoring" refers here to the electorate's ability to assess whether politicians are choosing policies in the public interest. I have not distinguished among the several reasons why voters may have trouble making this assessment – stochastic relationships between policies chosen and outcomes observed (what is modeled here), lack of knowledge about what policy is in one's own best interest (Harrington 1993a), asymmetries of information between politicians and voters concerning policy (Larocca 1997), and so on. Differences among these may have significant consequences for accountability and responsiveness.

how does the politician look and sound when giving a speech? What sort of person does he or she seem like? It is an interesting and open question as to how well voters can select "good types" based on this sort of information, and quite relevant to the question of how well elections serve democracy.

Appendix

Pure Selection

Derivation of the electorate's decision rule proceeds as follows. Let $\alpha'(z)$ represent the electorate's updated belief that the incumbent is a good type, conditional on observing welfare level z. Bayes's rule states (in odds-ratio form) that the posterior odds that I is a good type, $\alpha'(z)/(1 - \alpha'(z))$, equals the prior odds, $\alpha/(1 - \alpha)$, times the likelihood ratio, $f(z)/f(\hat{x}^2 + z)$. (The likelihood ratio derives here from $Pr\ (z \approx 0 + \varepsilon)/Pr(z \approx -\hat{x}^2 + \varepsilon)$. Thus, $\alpha'(z) > \alpha$ if and only if $f(z) > f(\hat{x}^2 + z)$. Intuitively, the posterior belief that the incumbent is a good type increases if it is more likely that the electorate would observe z if the incumbent were good than bad. The optimal performance criterion is then defined by the welfare level k that satisfies $f(k) = f(\hat{x}^2 + k)$.

As indicated by Figure 2.1, for f such that $f'(z) = 0$ only at $z = 0$, there is a unique cut rule k that satisfies this equality. Further, when f is symmetric as well, we can specify the performance criterion exactly. It must be $k = -\hat{x}^2/2$, since $f(k) = f(-k) = f(\hat{x}^2 + k)$.

To see the claim in the text about monitoring, consider a logistic distribution $F(z) = e^{z/a}/(1 + e^{z/a})$, where $a > 0$ parameterizes variance (greater a implies higher variance). Observe that since the optimal cut rule $k < 0$, $\lim_{a \to \infty} 1 - F(k) = \lim_{a \to \infty} 1 - F(-k) = 1/2$, $\lim_{a \to 0} 1 - F(k) = 1$, and $\lim_{a \to 0} 1 - F(-k) = 0$, as claimed. The same holds for a normal distribution.

Pure Sanctioning

The electorate's optimal cut rule k^* is found by considering how the incumbent would choose given any particular rule k, and then choosing k so as to induce the smallest choice of x possible. As argued in the text, because the electorate is indifferent between all candidates in the second period, it is optimal for it to implement any cut rule.
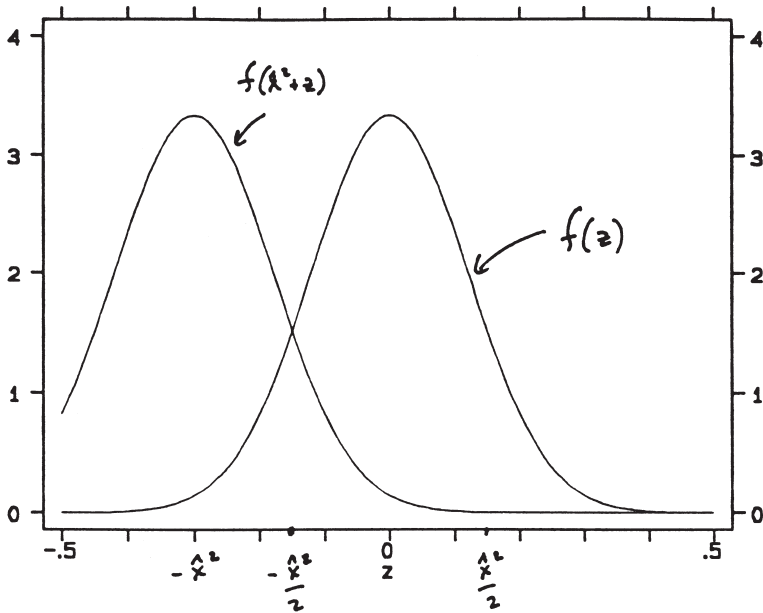
Figure 2.1. Pure selection

Given a k, the incumbent chooses x to maximize

$$u(x) = W - (1-x)^2 + \delta(1 - F(x^2 + k))W, \tag{1}$$

where $1 - F(x^2 + k) = 1 - Pr(-x^2 + \varepsilon < k) = 1 - Pr(z < k)$ is the probability that the incumbent will be reelected given x and k. Notice that the right-hand side of (1) implicitly incorporates the fact that the incumbent will choose $y = 0$ in the second period, by subgame perfection.

The first-order condition is $u'(x) = 2(1 - x) - \delta W f(x^2 + k)2x = 0$, which yields

$$f(x^2 + k) = \frac{1-x}{x} \frac{1}{\delta W}. \tag{2}$$

Provisionally assuming that the second-order condition is also satisfied, equation (2) implicitly defines the incumbent's best response x as a function of k; call it $x(k)$. The right-hand side of (2) is decreasing in x, so that E gets the smallest x possible by choosing k so as to maximize the left-hand side, given $x(k)$. The assumption that $f(\cdot)$ is strictly unimodal and has mean zero implies that $f(\cdot)$ reaches its maximum value at $f(0)$. Thus, to induce the

minimum possible value of x, E chooses k^* such that $x(k^*)^2 + k^* = 0$.

Letting $x^* = x(k^*)$, we can solve directly for x^* from

$$f(0) = \frac{1 - x^*}{x^*} \frac{1}{\delta W}. \tag{3}$$

Thus, $x^* = 1/(1 + \delta W f(0))$ and $k^* = -x^{*2}$.

As the variance of a normal or logistic $f(\cdot)$ increases, $f(0)$ falls, increasing the equilibrium amount of shirking (x^* increases), and making the performance criterion less strict (k^* falls). (It is worth pointing out that the solutions for x^* and k^* hold for *any* strictly unimodal distribution for ε.)

It remains to check that the second-order condition is satisfied at x^* and k^*. This condition requires that

$$u''(x) = -2 - 2\delta W[f(x^2 + k) + 2x^2 f'(x^2 + k)] < 0 \tag{4}$$

at x^* and k^*, which is true since $x(k^*)^2 + k^* = 0$, $f(0) > 0$, and $f'(0) = 0$.

The Mixed Case: Selection and Sanctioning

The game is solved for pure-strategy perfect Bayesian equilibria (PBE) in which the electorate uses a cut rule in deciding whether to reelect the incumbent. Specifying strategies is simplified if we immediately apply subgame perfection to the new or old incumbent's choice of a policy y in the second period of the game: For all prior histories of play, good types maximize their utility by setting $y = 0$, and bad types by choosing $y = 1$. With this understood, a pure strategy for the incumbent in the first period amounts to a choice of $x \in \mathbb{R}$ for each type. A pure strategy for the electorate is a function $s_E(z) \in \{0, 1\}$, which gives the electorate's decision to keep (1) or drop (0) the incumbent for each possible observation $z \in \mathbb{R}$. Attention is restricted to functions of the form $s_E(z) = 1$ if and only if $z \geq k$.[40] Let $s = (x_g, x_b, k)$ represent a strategy triple where the first two elements are the good and bad type's first-period policy choices and the third is the electorate's cut rule. A system of beliefs for the electorate is a

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[40] See Banks and Sundaram 1996 for a proof of the optimality of such cut rules in a similar model.

function $\alpha'(z) \in [0, 1]$, which gives the electorate's posterior belief that the incumbent is a good type after having observed welfare level z.

A pure-strategy PBE is then defined as an s and a system of beliefs $\alpha'(z)$ such that each player's strategy is optimal given beliefs at every one of the player's information sets, and the electorate's beliefs are formed using Bayes's rule whenever possible.

Working backward by considering the electorate's choice of whether to keep or drop the incumbent, observe that E's expected utility for reelecting the incumbent is $\alpha'(z)0 + (1 - \alpha'(z))(-1) = -(1 - \alpha'(z))$, while the expected utility of drawing a new incumbent from the pool is just $-(1 - \alpha)$. Thus optimal choice for the electorate entails keeping the incumbent if $\alpha'(z) \geq \alpha$. In odds ratio form, Bayes's rule says that

$$\frac{\alpha'(z)}{1-\alpha'(z)} = \frac{f(x_g^2+z)}{f(x_b^2+z)} \frac{\alpha}{1-\alpha},$$

so that E keeps the incumbent if $f(x_g^2 + z) \geq f(x_b^2 + z)$ and not otherwise. Further, E is indifferent when it observes $z = k$, implying that in equilibrium k satisfies

$$f(x_g^2 + k) = f(x_b^2 + k). \tag{5}$$

Next, consider what choices of x_g and x_b would be optimal for the incumbent in the first period, given the expectation that the electorate is using the cut rule k. The bad type's maximization problem is exactly the same as in the pure sanctioning case considered earlier, so condition (2) again implicitly defines a bad type's best response $x(k)$. Good types choose x to maximize $W - x^2 + \delta(1 - F(x^2 + k))W$, which has its first-order condition $-2x - \delta f(x^2 + k)W2x = 0$ satisfied uniquely by $x = 0$. (That this is a maximum is apparent from inspection of the objective function.) So good types have a dominant strategy of choosing their ideal point $x = 0$, regardless of δ, W, and k.

Thus, condition (5) reduces to $f(k) = f(x_b^2 + k)$, which implies, since $f(\cdot)$ is symmetric and quasi-concave, that in any equilibrium $k \leq 0$ and

$$k = -x_b^2/2. \tag{6}$$

This last equality says how the electorate's performance criterion k responds given the policy choice expected from bad
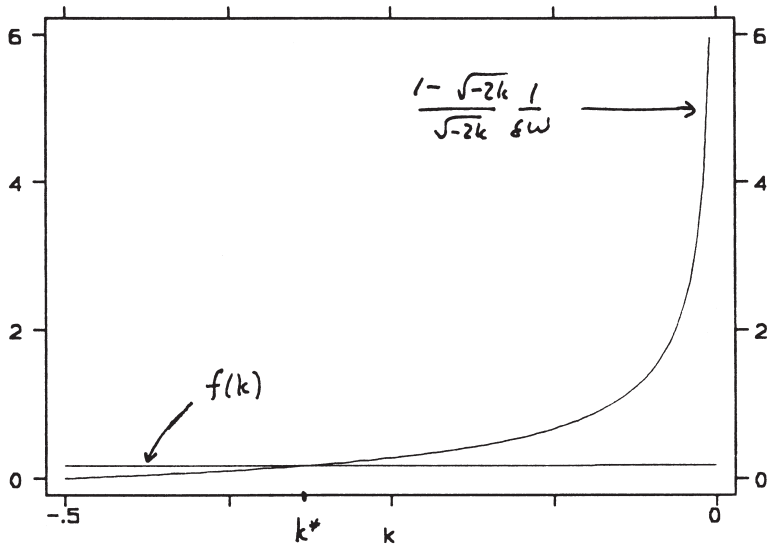
Figure 2.2a. Poor monitoring (high-variance noise)

incumbents.[41] As in the pure selection model, the better the bad types' expected performance (smaller x_b), the higher the level of welfare E needs to observe to conclude that the incumbent is more likely a good type than a new draw would be.

But of course the cut rule k also determines which x_b is optimal for the incumbent through condition (2). A PBE requires that the bad type's choice of x_b imply a cut rule k (through condition (6)) that in turn induces bad types to want to choose x_b (through condition (2)). Formally, $x_b = \sqrt{-2k}$ from (6), and substituting for x in (2) yields the condition that implicitly defines "interior" candidates for equilibrium k^*'s:

$$f(k) = \frac{1 - \sqrt{-2k}}{\sqrt{-2k}} \frac{1}{\delta W}. \tag{7}$$

Figures 2.2a–c graphically depict the determination of such k^*'s in three cases. The following claims are apparent from inspection of the figures: (a) There exists either one or three interior solutions to (7) (omitting nongeneric cases involving a tangency). (b) If $f(\cdot)$

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[41] Note also that $k \leq 0$ and $x_b^2 + k \geq 0$ imply that in any equilibrium good types will be reelected with a probability of at least 1/2, while bad types are reelected with probability at most 1/2.
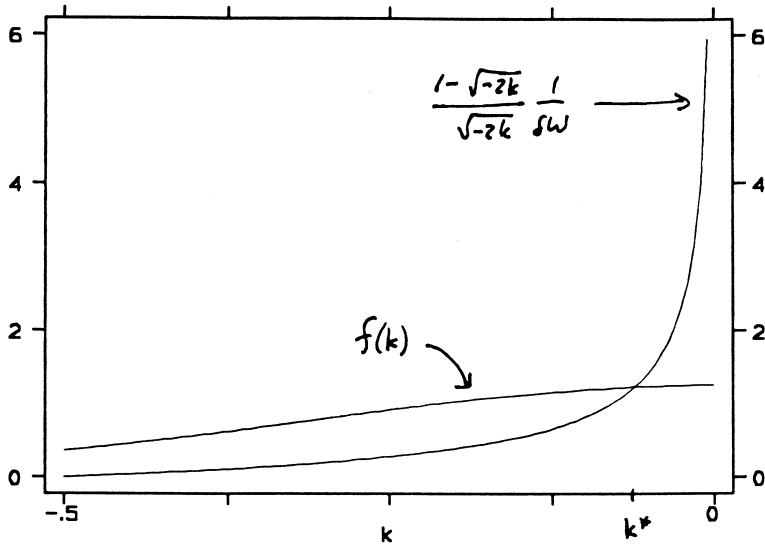
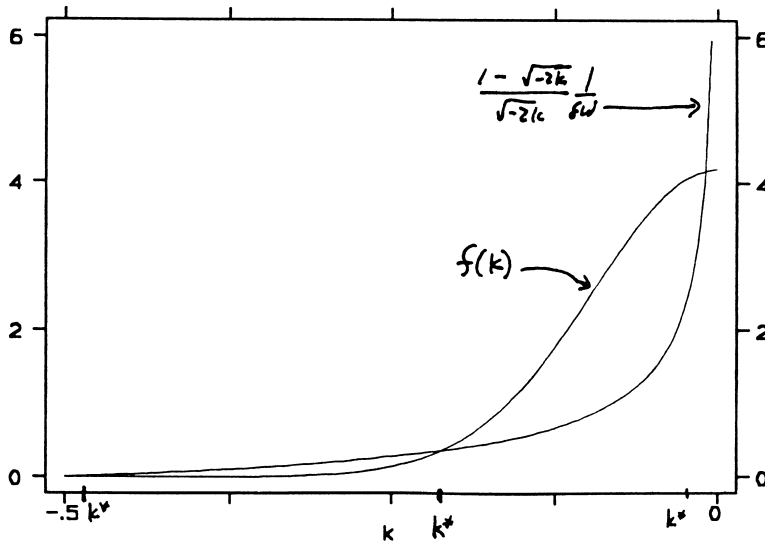**Figure 2.2b.** Moderate monitoring (moderate-variance noise)

Figure 2.2c. Good monitoring (low-variance noise)

is normal or logistic, then for large enough variance there is a unique interior solution that approaches $k = -1/2$ (thus, $x_b = 1$) as variance increases. If the interior solution is indeed a maximum,

then this implies that as monitoring worsens, bad types' choice of policy ultimately approaches $x_b = 1$, or total shirking. (c) For interior solutions, shirking need not decrease monotonically as monitoring improves (i.e., variance of f decreases), although for small enough variance there will exist an interior solution that involves almost no shirking (Figure 2.2c).

I next show that neither $x_b = 0$ nor $x_b = 1$ can be part of a PBE, so that if a PBE exists it involves at least one of the interior solutions to (7). At $x_b = 0$, $u'(0) = 2 - 2\delta W f(k)(0) > 0$ for all $k \in [-\infty, \infty]$, so bad incumbents always have an incentive to shirk at least a little. For $x_b = 1$, observe that $u'(1) = -2\delta W f(1 + k) < 0$ for all finite k, which means that the incumbent wants to choose $x_b < 1$ for any finite cut rule. And since neither $k = -\infty$ (sure reelection) nor $k = \infty$ (certain replacement) can support an equilibrium – in both cases E would optimally deviate to $k = -1/2$, ex post, since $x_b = 1$ would be expected – any pure-strategy PBE must involve an interior solution to the bad type's first-order condition given earlier.

For cases like Figure 2.2a, where there is only one interior solution, this must be a maximum since $u'(0) > 0$ and $u'(1) < 0$ for all finite k. For cases with three interior solutions to the first-order condition, I next show that the "middle" solution corresponds to a minimum, and thus is not a candidate.

Using the facts that at a solution to (7), $x^2 + k = -k$, $f(k) = f(-k)$ $= (1 - \sqrt{-2k})/(\sqrt{-2k}\ \delta W)$, and $f'(-k) = -f'(k)$, algebra applied to the second-order condition (4) can be shown to imply that $u''(k) < 0$ if and only if

$$f'(k) < \frac{1}{2} \frac{1}{(-2k)^{3/2}\, \delta W}. \tag{8}$$

Differentiating the right-hand side of (7) with respect to k gives $1/((-2k)^{3/2}\delta W)$ as the slope of this function. Since at a "middle" interior solution to (7), $f'(k) > 1/((-2k)^{3/2}\delta W)$, it follows that the second-order condition (4) cannot be satisfied. So we can say that the "middle" interior solution to (7) cannot support a PBE, and that at least one of the other two solutions (in this case) must support a PBE. Without specifying functional forms, we cannot say which one or both supports an equilibrium.[42]

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[42] In simulations using a normal distribution for ε, I have not found a single case in which multiple equilibrium obtain. I have been unable to show that this is necessarily the case.

This completes the derivation of equilibrium in the mixed case. I conclude with a comparison of the mixed and pure moral hazard models that demonstrates and elaborates several of the claims about the models made in the text.

Comparison of Mixed and Pure Moral Hazard Models

In the pure moral hazard case, the best the electorate can do is to induce politicians to choose the policy x_{mh} that satisfies conditions (3). This policy is defined implicitly by

$$f(0) = \frac{1 - x_{mh}}{x_{mh}} \frac{1}{\delta W}.$$

Suppose now that we introduce into the pool of candidates a very small fraction (α close to zero) of good types of politician who have policy preferences similar to the electorate or who are uncorruptible by interest group bribery, as in the mixed case. Writing (7) in terms of $x_b = \sqrt{-2k}$, where x_b is the equilibrium choice of bad types in the mixed case, we have

$$f(0) = \frac{1 - x_{mh}}{x_{mh}} \frac{1}{\delta W} > f\left(\frac{x_b^2}{2}\right) = \frac{1 - x_b}{x_b} \frac{1}{\delta W},$$

since $f(z)$ is maximized at $f(0)$ and $x_b > 0$. It follows immediately that regardless of how small α is, *bad types of politicians shirk more when there are some good types than when they are all the same* ($x_b > x_{mh}$).[43] This is a "pathological" result – introducing a sufficiently small chance that there are public-spirited politicians who will actually *lower* the public's utility, essentially by making the public unable to commit not to select on type at the polls. The imperative of selection then reduces the flexibility of the elections as a sanctioning instrument and leads to suboptimal motivating of bad types of politicians.

In more technical terms, lower hemicontinuity of the equilibrium correspondence fails at $\alpha = 0$; there exist equilibria in the $\alpha = 0$ case that are not the limit of any sequence of equilibria as α approaches zero. This result is in marked contrast to Banks

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[43] Note, in fact, that $\alpha \in (0, 1)$ plays *no* role in determining equilibrium strategies in the mixed case.

and Sundaram (1996), who consider a closely related model of elections that combines moral hazard and adverse selection. They find that the equilibria of their game with a small amount of type heterogeneity (adverse selection) "converge to equilibria of the 'pure moral hazard' case," so that "adding a 'little bit' of uncertainty about agent types will only move the agents a little bit away from their myopic actions" (1966: 25). A related implication is that the electorate "can . . . never lose from the introduction of 'better' types of agents" (1966: 5). Neither result holds in the model considered here, and it is natural to wonder why.

The crucial difference appears to be that my model ends in two periods, whereas Banks and Sundaram (1996) consider the case of an electorate with an infinite horizon and politicians who are constrained to serve at most two terms.[44] In pure moral hazard models with an infinite horizon and any commonly known, finite term limit, the electorate cannot commit to condition reelection on performance, and, in consequence, incumbents are completely uncontrolled in any subgame perfect equilibrium ("unraveling" occurs). By contrast, in a two-period, pure moral hazard model, voters can credibly promise to reelect incumbents who perform well. This allows equilibria in which politicians do not shirk completely in the first period, as shown here and by Austen-Smith and Banks 1989. I have considered the infinite-horizon, two-period term-limit case of the mixed model analyzed earlier, and find that Banks and Sundaram's (1996) result is reproduced there – introducing a small chance of a good type leads to a small improvement over the total shirking equilibrium of the pure moral hazard case.

The interesting question is whether the commitment problem discovered here would appear in an infinite horizon model with no term limits and both adverse selection and moral hazard. Banks and Sundaram 1993 satisfies these conditions, but there the politicians' choice variable is not policy but effort (as in Ferejohn 1986), and adverse selection is introduced by varying politicians' marginal costs for effort. It is easy to see that even in the two-period model considered here, if politicians vary only in their

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[44] Another difference that may be significant is that ideal-point preferences are not covered in the large class considered by Banks and Sundaram, which is formulated more with "effort" in mind rather than policy choices. Ideal-point preferences fail Banks and Sundaram's Assumption 6.

marginal costs for moving policy toward the median voter, then the electorate will be indifferent among all types in the second period and thus optimal sanctioning will be ex post credible. I suspect this is why no commitment problem appears in Banks and Sundaram 1993. (If correct, this would also indicate that the choice of "effort" or policy as the politician's choice variable is nontrivial.)

Thus far, I have been unable to analyze the infinite-horizon, no-term-limit case of the model with politicians who vary in policy preferences. For the reasons given in footnotes 29 and 32, I would conjecture that the commitment problem will appear here as well as in the two-period case.

A final significant point about the mixed model is that moral hazard is not necessary to generate the commitment problem pathology discussed earlier. Consider the same model but with perfect monitoring – assume the electorate observes the policy choice x directly, and so can condition the incumbent's reelection on it. Consider a rule for the electorate that says, "we will reelect if you choose our optimal policy, $x = 0$." A bad type of incumbent will want to mimic a good type and choose $x = 0$ provided that $W - 1 + \delta W \geq W + 0$, or $\delta W > 1$. And in this event, the electorate is willing to reelect if it sees $x = 0$, since its posterior that the incumbent is good is then $\alpha'(x = 0) = \alpha$, implying indifference. So in this case adding a small chance of good type has no effect – the electorate gets an expected payoff of approximately $0 + \delta(-1)$ whether $\alpha = 0$ or is very close to 0.

Suppose, however, that $\delta W < 1$. In this case the best the electorate can do when all politicians are bad types ($\alpha = 0$) is to employ the rule "we will reelect if you choose a policy $x \leq \hat{x}$," where $\hat{x}$ is defined by $W - (1 - \hat{x})^2 + \delta W = W$, or $\hat{x} = 1 - \sqrt{\delta W}$. $\hat{x}$ is the policy choice that leaves a bad type indifferent between choosing $\hat{x}$ to get reelected and shirking completely and not getting reelected.

But if some politicians are good types ($\alpha > 0$), the electorate will infer that the incumbent is a bad type if it sees $\hat{x} > 0$, which implies that it should dump the incumbent in favor of a new draw who has some chance of being a good type in the second period. Thus what was an equilibrium when $\alpha = 0$ collapses, leaving a radically different and unique PBE in which bad types shirk completely, choosing $x = 1$ and being tossed out of office for sure. In this case, then, introducing a tiny chance of public-spirited politicians completely undermines elections as a mechanism of accountability.

(It is not difficult to show what these arguments go through if we consider an infinite horizon model with no term limits and no moral hazard.)

This last example also suffices to show that Reed's (1994) analysis is either mistaken or incomplete. Reed's model is essentially identical to that just analyzed, except that he considers a case where incumbent's ideal points are uniformly distributed. Reed solves for the $\hat{x}$ that is optimal for the electorate ex ante, but never asks if ex post it would be rational for the electorate to implement this rule in all states of the world. The example just given suggests that it almost surely is not, and that if it is under a uniform distribution, this would be an exceptional case.

One claim from the text remains to be demonstrated: that for small enough α, the electorate would be better off if it could commit in advance to use the performance criterion k^* that optimally motivates bad types (defined following equation (3)). To see this, we write the ex ante expected payoff for the electorate in the mixed case as follows:

$$u_E^{mix} = \alpha(0 + \delta[F(k)(-(1-\alpha))]) +$$
$$(1-\alpha)(-x_b^2 + \delta[F(x_b^2 + k)(\alpha - 1) + (1 - F(x_b^2 + k))(-1)]),$$

where the k and x_b are equilibrium values in the mixed case. Algebra simplifies this to

$$u_E^{mix} = -(1-\alpha)(x_b^2 + \delta[1 - \alpha(F(-k) - F(k))]).$$

Note that the term in brackets captures the payoff improvement due to the possibility of selecting a good type for the second period. In a similar fashion, the electorate's ex ante expected utility for commiting to the rule k^* defined for the pure moral hazard case is found to be

$$u_E^{mh} = -(1-\alpha)\left(x_{mh}^2 + \delta\left[1 - \alpha\left(.5 - F\left(k^*\right)\right)\right]\right),$$

where $x_{mh} < x_b$ is the bad type's policy given k^*. From algebra, it follows that $u_E^{mh} > u_E^{mix}$ when

$$x_b^2 - x_{mh}^2 > \delta\left[\alpha\left(F(-k) - F(k) - \left(.5 - F\left(k^*\right)\right)\right)\right].$$

For α close enough to 0, this necessarily holds, since $x_b^2 - x_{mh}^2 > 0$ and k and k^* are bounded between 0 and $-1/2$. In simulations with a normal distribution and $\delta W = 2$, the statement typically holds for all α less than about 1/2. For $\alpha > 1/2$, the utility loss from

suboptimal selection in the second period is greater than the gain from better motivation of bad types in the first period.

References

Austen-Smith, David, and Jeffrey Banks. 1989. "Electoral Accountability and Incumbency." In Peter Ordeshook, ed., *Models of Strategic Choice in Politics*, 121–50. Ann Arbor: University of Michigan Press.

Banks, Jeffrey, and Rangarajan Sundaram. 1990. "Incumbents, Challengers, and Bandits: Bayesian Learning in a Dynamic Choice Model." University of Rochester. Mimeographed.

1993. "Adverse Selection and Moral Hazard in a Repeated Elections Model." In William A. Barnett, Melvin J. Hinich, and Norman J. Schofield, eds., *Political Economy: Institutions, Competition, and Representation*, 295–313. Cambridge: Cambridge University Press.

1996. "Electoral Accountability and Selection Effects." University of Rochester. Mimeographed.

Barro, Robert. 1973. "The Control of Politicians: An Economic Model." *Public Choice* 14: 19–42.

Bender, Bruce, and John Lott. 1996. "Legislator Voting and Shirking: A Critical Review of the Literature." *Public Choice* 87 (1): 67–100.

Brady, David, and Edward Schwartz. 1995. "Ideology and Interests in Congressional Voting: The Politics of Abortion in the U.S. Senate." *Public Choice* 84: 25–48.

Cain, Bruce, John Ferejohn, and Morris Fiorina. 1987. *The Personal Vote.* Cambridge, Mass.: Harvard University Press.

Campbell, Angus, P. Converse, W. Miller, and D. Stokes. 1960. *The American Voter.* New York: John Wiley and Sons.

Carey, John. 1996. *Term Limits and Legislative Representation.* Cambridge: Cambridge University Press.

Dewatripont, M., and G. Roland. 1992. "Economic Reform and Dynamic Political Constraints." *Review of Economic Studies* 59: 703–30.

Dick, Andrew R., and John R. Lott. 1993. "Reconciling Voters' Behavior with Legislative Term Limits." *Journal of Public Economics* 50: 1–14.

Downs, Anthony. 1957. *An Economic Theory of Democracy.* New York: Harper and Row.

Ferejohn, John. 1986. "Incumbent Performance and Electoral Control." *Public Choice* 50: 5–25.

1993. "The Spatial Model of Elections." In Bernard Grofman, ed., *Information, Participation, and Choice*, 107–24. Ann Arbor: University of Michigan Press.

Fiorina, Morris P. 1981. *Retrospective Voting in American National Elections.* New Haven: Yale University Press.

Frank, Robert. 1988. *Passions within Reason: The Strategic Role of the Emotions.* New York: Norton.

Harrington, Joseph. 1993a. "The Impact of Reelection Pressures on the Fulfillment of Campaign Promises." *Games and Economic Behavior* 5: 71–97.

    1993b. "Economic Policy, Economic Performance, and Elections." *American Economic Review* 83 (1): 27–42.

Holmstrom, Bengt, and Paul Milgrom. 1991. "Multi-Task Principal-Agent Analyses." *Journal of Law, Economics, and Organization* 7 (1): 24–52.

Kalt, Joseph, and Mark Zupan. 1994. "Capture and Ideology in the Economic Theory of Politics." *American Economic Review* 74 (June): 279–300.

    1990. "The Apparent Ideological Behavior of Legislators: Testing for Principal-Agent Slack in Political Institutions." *Journal of Law, Economics, and Organization* 33 (April): 103–31.

Key, V. O. 1966. *The Responsible Electorate.* New York: Vintage Books.

Kishlansky, Mark. 1986. *Parliamentary Selection: Social and Political Choice in Early Modern England.* Cambridge: Cambridge University Press.

Larocca, Roger. 1997. "Informative Representation." University of Chicago. Mimeographed.

Levitt, Steven D. 1996. "How Do Senators Vote? Disentangling the Role of Voter Preferences, Party Affiliation, and Senator Ideology." *American Economic Review* 86 (June): 425–41.

Lott, John. 1987. "Political Cheating." *Public Choice* 52 (March): 231–46.

    1990. "Attendance Rates, Political Shirking, and the Effect of Post-Elective Office Employment." *Economic Inquiry* 28 (1): 133–50.

Lott, John, and Stephen Bronars. 1993. "A Critical Review and an Extension of the Political Shirking Literature." *Public Choice* 74 (December): 461–84.

Lott, John, and Michael Davis. 1992. "A Critical Review and an Extension of the Political Shirking Literature." *Public Choice* 76 (May): 125–49.

Lott, John, and W. Robert Reed. 1989. "Shirking and Sorting in a Model of Finite-Lived Politicians." *Public Choice* 61 (1): 75–96.

Manin, Bernard. 1997. *Principles of Representative Government.* Cambridge: Cambridge University Press.

Mayhew, David. 1974. *The Electoral Connection.* New Haven: Yale University Press.

McKelvey, Richard, and Raymond Riezman. 1992. "Seniority in Legislatures." *American Political Science Review* 83: 1181–1206.

Poole, Keith, and Thomas Romer. 1993. "Ideology, 'Shirking,' and Representation." *Public Choice* 77 (2): 185–96.

Reed, W. Robert. 1994. "A Retrospective Voting Model with Heterogeneous Politicians." *Economics and Politics* 6 (March): 39–58.

Rogoff, Kenneth. 1990. "Equilibrium Political Budget Cycles." *American Economic Review* 80: 21–37.

Rogoff, Kenneth, and Anne Sibert. 1988. "Elections and Macroeconomic Policy Cycles." *Review of Economic Studies* 55: 1–16.

Van Beek, James. 1991. *Public Finance Quarterly* 19 (4): 444–56.

Weber, Max. 1978. *Economy and Society.* Vol. 2. Berkeley: University of California Press.

Wright, M. B. 1993. "Shirking, Political Support, and Agency Costs in Political Markets." *Public Choice* 76 (June): 103–24.

Zielinski, Jakub. 1997. "Parties and Elections in Emerging Democracies." Paper presented at the 93rd annual meeting of the American Political Science Association.

Zupan, Mark. 1990. "The Last Period Problem in Politics: Do Congressional Representatives Not Subject to a Reelection Constraint Alter Their Voting Behavior?" *Public Choice* 65 (May): 167–80.