

Directing Retribution: On the Political Control of Lower Court  
Judges

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## Abstract

The sentencing decisions of trial judges are constrained by statutory limits imposed by legislatures. At the same time, judges in many states face periodic review, often by the electorate. We develop a model in which the effects of these features of a judge's political landscape on judicial behavior interact. The model yields several intriguing results: First, if legislators care about the proportionality of punishment, judicial discretion weakly *increases* with their punitiveness. Second, voters are limited by two factors in their ability to make inferences about judicial preferences based on observed sentences: the extent to which judges are willing to pander to retain office and the range of judicial discretion mandated by the legislature. Finally, legislators can sometimes manipulate judicial discretion to aid sufficiently likeminded voters in their efforts to replace ideologically dissimilar judges.

# 1 Introduction

Lower court judges are fundamental players in the day-to-day operation of the criminal justice system. Voters and their elected representatives delegate responsibility to them to make decisions that, at the extreme, help to determine whether convicted felons live or die. It is perhaps not surprising, therefore, that the exercise of judicial discretion is prone to recurrent political controversy. Conservatives complain that judges ignore citizen preferences regarding the appropriate punishment of the guilty and the contours of public morality more generally (Lambro 2005). Progressive critics of judicial elections express fear that judges may knowingly exceed appropriate punishment in order to appear tough on crime to voters (Croly 1995).

Concerns about the behavior of judges echo apprehensions about numerous government officials to whom authority is delegated. Bureaucrats might shirk their responsibilities by implementing policy at odds with the preferences of their elected principals or citizens more broadly (Lowi 1979; Epstein and O'Halloran 1994, 2000; Huber and McCarty 2004), overstate costs to pad their budgets (Niskanen 1971), or engage in other forms of renegade action (Davis 1969). The fear of shirking by agents has led both legislators and executives to expend significant resources to identify competent likeminded bureaucrats, place formal limits on their discretion, and subject them to ex post review and potential dismissal.

Contemporary political conflict surrounding the control of judicial behavior echoes that surrounding the control of bureaucrats. Liberals and conservatives alike actively seek to ensure the selection of ideologically similar judges, with important consequences for the composition of the judiciary. Likewise, the push to implement mandatory minimum and maximum sentences, as well as the more general effort to structure judicial sentencing through the imposition of sentencing guidelines and enhancements, are correctly seen as attempts by elected officials to prevent judges from assigning sentences at odds with legislative preferences. Finally, the contentiousness of both judicial reappointment proceedings and elections involving incumbent judges underscore persistent concern about the behavior of sitting judges.

Political control of the authority of trial judges to sanction punishments has clear parallels with similar efforts to constrain bureaucrats. At the same time, two features of this authority and its context make the application of existing models of delegation in politics problematic. First, political conflict surrounding the nature of punishment at base concerns disagreements over *proportionality*. While all might concede that a defendant who is not culpable should not be punished, reasonable people disagree about how rapidly punishment should increase with culpability. As we detail below, the nature of these disagreements cannot be adequately captured by canonical spatial models of delegation in politics. Second, judges in 39 states must stand for periodic review and potential replacement by voters. In eight additional states, incumbent judges are reviewed by either commission or other elected officials. Judges therefore differ from bureaucrats, most of whom are protected from replacement by civil service rules. As such, lower court judges are simultaneously constrained ex ante and subject to review ex post.

In this paper, we incorporate these features into a comprehensive formal model of judicial sentencing discretion. In the model, a legislative body enacts formal constraints on judicial discretion, judges sentence given their own private information regarding defendant culpability, and voters decide whether to retain judges given observed sentences. The fact that the actors in the model value proportionality creates important asymmetries between lenient and punitive legislators and voters in their ability to control judicial behavior and replace unlike-minded judges. Surprisingly, it is the most lenient legislators that wish to place the strongest constraints on judicial sentencing. However, more punitive legislators will be generically more displeased with the judicial system than

their more lenient counterparts.

The fact that judges are constrained *ex ante* and reviewed *ex post* also creates a rich set of strategic interactions between the legislator and the voter. The relationship between *ex ante* constraints and *ex post* review is complex, so we break the full model into its component parts before considering their interaction. After discussing the model’s assumptions, we first derive optimal *ex ante* minimum and maximum sentences in the absence of *ex post* review. Next, we consider *ex post* voter oversight of judges in the absence of binding *ex ante* constraints. Finally, we consider *ex ante* constraints and *ex post* review in tandem.

The model suggests that the ability of voters to make inferences about judicial preferences will be altered by the severity of legislated constraints on judicial discretion and judges’ incentives to pander to voter tastes in order to retain office. In our model, legislators will take these issues into account when deciding how stringent those constraints should be. In some cases, legislators may expand judicial discretion to exploit the ability of likeminded voters to screen ideologically divergent judges. We conclude by discussing several substantive extensions of our framework, the consonance of our model with features of current debates over judicial discretion, and a number of predictions amenable to empirical testing.

## 2 The Model

### 2.1 Basic Setup

The model takes its cue from previous models of delegation under incomplete information in political science, with three important departures. First, in the traditional spatial delegation setup (e.g. Gilligan and Krehbiel 1987, Epstein and O’Halloran 1994, 2000; Volden 2002), actors have single-peaked preferences over outcomes, which are expressed as the sum of policy and a random shock representing the state of the world (for a discussion of the importance of the additivity assumption, see Bendor and Meirowitz 2004). Actors’ ideal points are static, and thus the extent of disagreement among actors over outcomes is also static.

These assumptions must be modified to capture the environment in which lower court judges operate. In particular, some of the most politically salient decisions facing a judge concern the appropriate severity of his response to a particular set of circumstances. The clearest case of this is the sentencing decision of the trial judge. To capture these kinds of preferences more accurately, we assume that all actors have ideal severity *schedules*. A severity schedule associates the seriousness of the circumstances facing a judge – e.g. a defendant’s culpability – with an appropriate response (e.g. punishment). In the case of criminal sentencing, culpability may refer to the defendant’s criminal history, state of mind, victim characteristics, etc. Note that we take culpability to denote a particular fact pattern revealed at trial (weighted by the quality of evidence), and not the corresponding appropriate level of punishment, about which reasonable people may disagree.

Each player adheres to a weak version of the normative principle of *proportionality* (Beccaria [1764] 1997). This requires that an increase in culpability demands the same or greater punishment.<sup>1</sup> Likewise, all players agree that defendants who are minimally culpable should face the minimum punishment. Players disagree, however, about when and how rapidly punishment should increase as a function of culpability.

Second, delegation models typically assume that the relevant actors’ preferences are common knowledge while the underlying state of the world is private information held by an agent. We

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<sup>1</sup>As will become clear below, the weak version of proportionality is an artifact of the discrete game form.

depart from the canonical setup by assuming that both circumstances and a judge’s preferences are private information initially known only to the judge. Principals (legislators and voters) have prior beliefs about both, and update those beliefs given the agent’s actions.

Third, rather than focus our attention on a single principal we consider a problem of common agency. Judges have two principals, a legislator and a decisive voter. The former is responsible for shaping the institutional environment in which judges and voters interact. The latter, representative of the electorate more broadly, evaluates the behavior of the agent based on a noisy signal (the sentence). Our model is not unique in its treatment of common agency in a political setting. McCarty (2004), for example, considers a problem of common agency in the context of bureaucratic policy making. In his model, Congress funds an agency, and the President appoints its head. Our causal story differs from McCarty’s in its emphasis on incomplete information: The actions of one principal will, in equilibrium, structure the other’s beliefs about the agent.

## 2.2 Model Primitives

The model is a two-period game consisting of three players: a judge  $j$ , a voter  $v$ , and a legislator  $c$  (Congress). Congress sets *ex ante* constraints on the judge’s sentencing discretion, the judge assigns sentences, and the voter decides whether to retain a judge after observing his sentencing given the constraints. In order to focus on the control of judicial behavior in particular, we will abstract away from the electoral connection between voters and legislators, allowing their preferences to diverge in the basic model (but returning to this relationship in Section 4). One justification for proceeding in this way is that voters evaluate legislators on many dimensions other than the constraints they impose on sentencing discretion. This creates the possibility for the legislature to respond to interest groups whose preferences diverge from those of the median voter (e.g. Grossman and Helpman 2001) in setting sentencing discretion. As will become clear below, the case in which voters succeed in choosing likeminded legislators is a special case of our more general model.

Additionally, although we refer to the judge’s “*ex ante* principal” as the legislator or Congress, the model covers systems in which sentencing commissions have authority to set sentencing rules from which the judge can only depart in special circumstances. Twenty-two states have sentencing commissions, which vary in the extent of their authority. Likewise, although we label the judge’s *ex post* principal the voter, we could apply the model to systems in which the executive, legislature, or independent commission has authority to reappoint sitting judges. In Connecticut, Maine, and New Jersey, incumbent judges are reappointed by the governor with the consent of the state senate. In South Carolina, Virginia, and Vermont, this responsibility belongs exclusively to the state legislature. In Hawaii, a judicial nominating commission determines whether to reappoint incumbent judges (Source: Bureau of Justice Statistics 1998). It is useful to keep these alternative arrangements in mind, particularly when we consider cases in which the preferences of the two principals diverge.

Our model assumes that voters evaluate judges on the basis of assigned sentences. Readers may be uncomfortable with the informational demands this assumption places on the voter. In reality, voters tend to know next to nothing about judicial sentencing, much less the constraints on discretion under which judges usually operate. One interpretation of the model is that it is typically a third party, for example the media or other political actors (e.g. challengers in judicial elections), that brings perceived instances of judicial malfeasance to the attention of voters. Recent empirical research (Huber and Gordon 2004; Gordon and Huber 2006) suggests that voter ignorance may be a consequence of judicial deference to public opinion in criminal sentencing, which usually denies third parties a case to make to voters. Our modeling assumptions are consistent with the premise

that these actors cannot persuade voters to punish a judge for failing to impose a sentence that was illegal for him to impose.

Player  $i$  has type  $t_i \in T$ . The type of the judge and his potential replacement are independent draws from a probability distribution, with  $\Pr(t_j = t) = \pi_t$  and  $\sum_{t \in T} \pi_t = 1$ . Legislator and voter type are exogenous and common knowledge. Circumstances are represented by  $k \in K$  and indexed by  $n = 1, 2, \dots, N$ , with  $\Pr(k = k_n) = \gamma_n$  and  $\sum_{k \in K} \gamma_n = 1$ .

The judge can assign a sentence  $s \in S$ , indexed by  $z = 1, 2, \dots, Z$ , subject to ex ante constraints implemented by the legislator. Those constraints are reflected in the judge's *discretionary set*  $\hat{S} \subseteq S$ , where  $\hat{S} \neq \emptyset$  and  $\hat{S}$  persists through both periods of the game.

The full sequence of events is as follows:

*First Period:*

1. The legislator chooses the discretionary set  $\hat{S}$ .
2. Nature chooses  $t_j$  and  $k$ .
3. The judge observes  $\hat{S}$ ,  $t_j$ , and  $k$ , and chooses sentence  $s \in \hat{S}$ .
4. The voter observes  $s$  and  $\hat{S}$ , and retains the incumbent ( $R = 1$ ) or not ( $R = 0$ ).

*Second Period:*

1. Nature chooses  $k'$ , and if the first period judge was replaced,  $t'_j$ .
2. The judge observes  $k'$  and chooses sentence  $s' \in \hat{S}$ .

Let  $\phi_{t_i}(s, k) : S \times K \rightarrow \mathbb{R}$  be the mapping of sentences and circumstances for an actor of type  $t_i$  to the real line. Then given discount factor  $\delta_i$ , the utility function of the voter and congress are given by

$$U_{i \in \{v, c\}}(s, s', R, k, k', t_i) = \phi_{t_i}(s, k) + \delta_i \phi_{t_i}(s', k'),$$

and the utility function of the incumbent judge is,

$$U_j(s, s', R, k, k', t_j) = \phi_{t_j}(s, k) + b + \delta_j(\phi_{t_j}(s', k') + Rb),$$

where  $b > 0$  is the intrinsic benefit of holding office.

In the version of the model considered here, we will make the following additional assumptions:

1. (a) There are three types of actors:  $T = \{L, M, H\}$ , where  $L$  represents lenient types,  $M$  moderate types, and  $H$  harsh types, (b)  $\pi_H = \pi_L = \pi$ , and (c)  $0 < \pi < \frac{1}{2}$ .
2. (a) There are four levels of defendant culpability, ( $N = 4$ ):  $K = \{k_1, k_2, k_3, k_4\}$ , with  $k_{n''} > k_{n'}$  for all  $n'' > n'$  and (b)  $\gamma_k = \frac{1}{4}$  for all  $k$ .
3. There are three possible sentences ( $Z = 3$ ):  $S = \{s_1, s_2, s_3\}$ , with  $s_{z''} > s_{z'}$  for all  $z'' > z'$ .
4.  $\hat{S}$  must be contiguous in  $S$ . In the current context, this implies that  $\hat{S} = \{s_1, s_3\}$  is not feasible.
5. Let  $a > 0$ .  $\phi_{t_i}(s, k)$  is characterized as follows:

$$\begin{array}{c}
t_i = L \\
\begin{array}{|c|c|c|c|c|}
	$\mathbf{k}_1$	$\mathbf{k}_2$	$\mathbf{k}_3$	$\mathbf{k}_4$
$\mathbf{s}_3$	$-2a$	$-2a$	$-2a$	$-2a$
$\mathbf{s}_2$	$-a$	$-a$	$-a$	$-a$
$\mathbf{s}_1$	$0$	$0$	$0$	$0$

\end{array}
\quad
\begin{array}{c}
t_i = M \\
\begin{array}{|c|c|c|c|c|}
	$\mathbf{k}_1$	$\mathbf{k}_2$	$\mathbf{k}_3$	$\mathbf{k}_4$
$\mathbf{s}_3$	$-2a$	$-2a$	$-a$	$-a$
$\mathbf{s}_2$	$-a$	$-a$	$0$	$0$
$\mathbf{s}_1$	$0$	$0$	$-a$	$-a$

\end{array}
\quad
\begin{array}{c}
t_i = H \\
\begin{array}{|c|c|c|c|c|}
	$\mathbf{k}_1$	$\mathbf{k}_2$	$\mathbf{k}_3$	$\mathbf{k}_4$
$\mathbf{s}_3$	$-2a$	$-a$	$-a$	$0$
$\mathbf{s}_2$	$-a$	$0$	$0$	$-a$
$\mathbf{s}_1$	$0$	$-a$	$-a$	$-2a$

\end{array}
\tag{1}$$

Three types of actors and four levels of culpability are useful in conveying the weak proportionality intuition discussed above. Contiguity is natural given our understanding of legislated constraints on discretion. In effect, the legislator cannot demand for a given crime that the punishment be high or low, but not moderate.

As the matrices in (1) make apparent, lenient actors most prefer the smallest sentence irrespective of the defendant's culpability. Moderate actors prefer small sentences for the lower two levels of culpability, and mid-level sentences for the higher levels. Harsh actors prefer the lowest possible sentence for the least culpable offenders, and the highest possible sentence for the most culpable. For medium levels of culpability, they prefer the middle sentence. Departures from the judge's preferred sentence are costly to the judge.

In order better to understand the mechanics of the model, we will first consider the relationship between the legislator and judge in isolation. Because this version of the model contains no review of incumbent judges (and thus no strategic transmission of information), we can solve for the unique subgame perfect Nash equilibrium via backward induction. Second, we will consider ex post review given full discretion (i.e. when  $\hat{S} = \{s_1, s_2, s_3\}$ ). Finally, we will consider the full model, in which the judge is subject to both ex ante constraints and ex post review. In versions of the game with ex post review, we characterize sequential equilibria of the game, which require that actors' choices be sequentially rational given the choices of the actors and consistent with beliefs on and off the path of play. (Below, we will discuss criteria for equilibrium selection in greater detail.)

### 3 Equilibrium

#### 3.1 Ex Ante Constraints in Isolation

This reduced form of the full model is appropriate for the analysis of systems with no reappointment process (the federal courts, Massachusetts, Rhode Island, and New Hampshire). Absent voter evaluation of incumbents, all judges simply assign their most preferred (constrained) sentences in both periods of play. Let  $\tilde{s}_{t_j}(k|\hat{S})$  represent the sentence a judge of type  $t$  assigns given culpability  $k$  and discretionary set  $\hat{S}$ . The legislator's expected utility over both periods may be expressed as

$$E[U_c(\hat{S}|t_c, \cdot)] = \sum_{t_j \in T} \sum_{k \in K} (\pi_t \gamma_n \phi_{t_c}(\tilde{s}_{t_j}(k|\hat{S}), k_n)) + \delta_c \sum_{t_j \in T} \sum_{k \in K} (\pi_t \gamma_n \phi_{t_c}(\tilde{s}_{t_j}(k'_n|\hat{S}), k'_n)), \tag{2}$$

which she will seek to maximize.

**Proposition 1 (Ex Ante Constraints)** *In the absence of ex post review by voters, the following profile of strategies constitutes a unique subgame perfect Nash equilibrium: (a)  $\hat{S}^* = \{s_1\}$  if  $t_c = L$ ; (b)  $\hat{S}^* = \{s_1, s_2\}$  if  $t_c = M$ ; (c)  $\hat{S}^* = \{s_2, s_3\}$  if  $t_c = H$ . Additionally, (d) for all judge types, discretionary sets, and circumstances, sentences are described in Table 1.*

**Proof.** See appendix. ■

In the absence of any incentive to depart from their preferred sentences in order to retain office, judges simply assign the closest sentence, within the discretionary set, to what they perceive as appropriate given the circumstances of the case. In expectation of this behavior by judges, legislators adjust sentencing constraints to maximize their expected utility. For the lenient legislator, all sentences other than  $s_1$  entail loss irrespective of circumstances; consequently, she insists that the judge assign  $s_1$  in all cases. The moderate legislator takes advantage of the judge’s knowledge of case-specific circumstances, expanding judicial discretion to allow sentences of  $s_1$  and  $s_2$ , but not  $s_3$  (which the moderate legislator never wants to assign). The cost to the moderate legislator is the recognition that lenient judges will sometimes impose sentences the legislator would think are too low (when  $k = k_3$  or  $k_4$ ), and harsh judges will sometimes impose sentences the legislator would think are too high (when  $k = k_2$ ). Finally, the harsh legislator faces the most difficult tradeoff. She expects that a quarter of the time, the appropriate judicial response is  $s_1$ . However, to permit judges to assign  $s_1$  is to grant lenient and moderate judges the authority to impose that sentence when the legislator would find it insufficient (when  $k \neq k_1$ ). Thus, the harsh legislator adopts a mandatory minimum of  $s_2$ , even while recognizing that defendants with minimal culpability will be overpunished.

**Remark 1 (Punitiveness and judicial discretion)** *The most lenient legislator places the strongest restrictions on judicial discretion.*

This follows immediately from the legislator’s equilibrium strategy. It is worth highlighting, however, because it stands in marked contrast to the stylized fact that it is the most punitive politicians who favor constraining an “out-of-control” judiciary. This characterization emerges in part from the perceived harshness of mandatory *minimum* sentences, particularly for drug crimes at the federal level. But a full description of judicial discretion requires accounting for statutory maximum as well as minimum sentences. The lenient legislator can most easily induce faithful agency on the part of the judges through low maximum sentences. Focusing only on mandatory minimum sentences is a kind of selection bias, in which the strongest possible constraint on judicial discretion – lowering a maximum sentence to the point of decriminalization – is removed from consideration.

**Remark 2 (Induced attitudes toward the judiciary)** *In expectation, the harsh legislator will be more displeased with the judicial system than either the moderate or lenient legislator.*

Critically, this does not depend on the existence of a preponderance of “bleeding heart” judges. To understand the source of the harsh legislator’s anticipated dissatisfaction, we must consider the probability that a judge assigns a sentence that a fully-informed legislator would eschew. Suppose all judge types are equally likely, i.e.  $\pi = 1/3$ . Given optimal constraints on discretion, the harsh legislator can anticipate that 5/12 of the time, the punishment will be either too low (2/3 of judges will not assign  $s_3$  given the highest culpability) or too high (all judges are inhibited from assigning  $s_1$  given the lowest culpability). By contrast, the moderate legislator need only worry about departures from preferred sentences 1/4 of the time, and the lenient legislator can always get her way. This result generalizes for all permissible values of  $\pi$ .

Finally, we note that neither of the results summarized by the preceding two remarks is an artifact of the discrete setup of the model. In an earlier version of this paper employing a model with a continuous range of sentences, judge types, and culpability levels, we demonstrated that judicial discretion strictly increases with the punitiveness of the legislator – a stronger result than

Table 1: Judges' Equilibrium Strategies in the Absence of Incentives to Pander

$$\hat{\mathbf{S}} =$$

	$\{s_1\}$	$\{s_2\}$	$\{s_3\}$	$\{s_1, s_2\}$	$\{s_2, s_3\}$	$\{s_1, s_2, s_3\}$
$L$	$s_1 \forall k$	$s_2 \forall k$	$s_3 \forall k$	$s_1 \forall k$	$s_2 \forall k$	$s_1 \forall k$
$M$	$s_1 \forall k$	$s_2 \forall k$	$s_3 \forall k$	$s_1$ if $k = k_1, k_2$ $s_2$ if $k = k_3, k_4$	$s_2 \forall k$	$s_1$ if $k = k_1, k_2$ $s_2$ if $k = k_3, k_4$
$H$	$s_1 \forall k$	$s_2 \forall k$	$s_3 \forall k$	$s_1$ if $k = k_1$ $s_2$ if $k = k_2, k_3, k_4$	$s_2$ if $k = k_1, k_2, k_3$ $s_3$ if $k = k_4$	$s_1$ if $k = k_1$ $s_2$ if $k = k_1, k_2$ $s_3$ if $k = k_4$

the one presented here. Further, the expected utility to a legislator of her optimal discretionary set is strictly decreasing in legislative punitiveness.<sup>2</sup>

### 3.2 Ex Post Review in Isolation

Next, we analyze the relationship between the judge and the voter in the absence of ex ante constraints (i.e. when  $\hat{S} = \{s_1, s_2, s_3\}$ ). Like the legislator, the voter is uninformed about a particular judge's preferences and an individual defendant's culpability. The voter must make inferences on the basis of the judge's sentencing behavior and decide whether to retain the judge or replace him. Unlike the legislator, however, the voter lacks the ability to commit ex ante to a decision rule.

Because a judge's actions can transmit information about his type to voters, situations may exist in which he has an incentive to pander, i.e. to take an action different from that which he considers most appropriate given the circumstances of a case. In a sequential equilibrium, the voter's posterior beliefs will incorporate the possibility of judicial pandering, and the incentive to pander will be sequentially rational given the beliefs (and voter retention strategy) that this behavior will induce.

In the second round of play, judges, not fearing replacement, will impose their most-preferred sentence. Let  $E[u_j|\cdot]$  represent the expected utility to the judge from the second round of play. It is immediately apparent that for all types of judges, the expected second round utility of being retained,  $E[u_j|R = 1, \cdot] = \delta_j b$ , because he can assign his preferred sentences for all culpability levels. Likewise, if replaced, the judge must anticipate how a randomly drawn replacement will sentence, yielding:

$$\begin{aligned} E[u_j|R = 0, t_j = L] &= -\delta_j \frac{a}{2} \\ E[u_j|R = 0, t_j = M] &= -\delta_j \pi a \\ E[u_j|R = 0, t_j = H] &= -\delta_j \frac{a}{2}. \end{aligned}$$

If a judge is close to indifferent between being retained and being replaced, then he will not wish to pander in an effort to retain office. In contrast, if the judge values being retained much more than being replaced, pandering to hold office becomes an attractive option.

**Lemma 1 (Relative incentives to pander given full discretion)** *Suppose  $\hat{S} = \{s_1, s_2, s_3\}$ . Then lenient and harsh judges have a stronger incentive to pander than moderates.*

**Proof.** The net expected benefit of being retained for lenient and harsh judges is  $\delta_j(b + \frac{a}{2})$ , while that for moderate judges is  $\delta_j(b + \pi a)$ . The former is larger than the latter because  $\pi < \frac{1}{2}$  by assumption. ■

Given these incentives, there will be a multiplicity of cases. For clarity of exposition, we will focus on two: For sufficiently low values of  $b$  ( $< \frac{(2-\delta_j)a}{2\delta_j}$ ), no judges will want to pander even one "space" (e.g. from  $s_1$  to  $s_2$ ). For sufficiently high values of  $b$  ( $> \frac{(2-\delta_j\pi)a}{\delta_j}$ ), all judges will be willing to pander up to two spaces (e.g. from  $s_1$  to  $s_3$ ) to be reelected.

<sup>2</sup>The continuous version of the model assumes quadratic loss for departures from an actor's ideal sentence, a  $U(0, 1)$  distribution of defendant culpability, and a  $U(0, 1)$  distribution of judicial preferences regarding proportionality (summarized by a slope parameter reflecting how quickly punishment should increase with culpability).

**Case 1. Insufficient Incentives to Pander.** Absent both constraints on discretion and adequate incentive to tailor their behavior to retain office, judges simply implement their preferred sentence in each period. Let  $\hat{\pi}_{t_j}(s_z|\hat{S})$  denote the posterior probability, and therefore the voter's beliefs, a judge is of type  $t_j$  given an observed sentence  $s_z$  and judicial discretion  $\hat{S}$ .

**Proposition 2 (Ex post review absent pandering)** *Suppose  $\hat{S} = \{s_1, s_2, s_3\}$  and  $b < \frac{(2-\delta_j)a}{2\delta_j}$ . The following strategy profile and system of beliefs constitute a unique sequential equilibrium: (a) judges in both periods assign sentences per the last column of Table 1; (b) harsh voters retain incumbents if  $s = s_2$  or  $s_3$  and otherwise discard; moderate voters retain incumbents if  $s = s_2$  and otherwise discard; and lenient voters retain incumbents if  $s = s_1$  and otherwise discard; (c) additionally, voters' posterior beliefs over judge types are derived by Bayes' Rule, and characterized as follows:*

	$\hat{\pi}_L$	$\hat{\pi}_M$	$\hat{\pi}_H$
$s_1$	$\frac{4\pi}{2+\pi}$	$\frac{2-4\pi}{2+\pi}$	$\frac{\pi}{2+\pi}$
$s_2$	0	$\frac{1-2\pi}{1-\pi}$	$\frac{\pi}{1-\pi}$
$s_3$	0	0	1

**Proof.** See appendix. ■

The mechanics of the no-pandering equilibrium are most easily understood with reference to the harsh voter. Because only harsh judges ever impose  $s_3$ , observing that sentence causes the voter to conclude that the judge must be likeminded. Both moderate and harsh judges might at times impose  $s_2$ , but the mix of those judges implied when that sentence is observed is preferable to a new draw that might include a lenient judge, so the harsh voter still prefers to retain. Finally, all judges might sometimes impose  $s_1$ , but the likelihood that a lenient judge was responsible makes the voter prefer replacing the incumbent with a new draw after observing the lowest sentence. A similar logic governs the decisions of the other types of voters.

**Case 2. Strong Incentives to Pander.** In the previous case, judges were unwilling to deviate from their most preferred sentence in order to retain office. This rendered the voter's problem of drawing inferences about judge types from observed sentences straightforward and the equilibrium unique. By contrast, if  $b$  is sufficiently high, then all judges will be willing to alter their sentences in order to retain office. This can lead to a multiplicity of equilibria.

Note that irrespective of the voter's type, given full discretion there exist three uninteresting pooling equilibria in which all judges, regardless of preferences or circumstances, converge on a single sentence and voters, upon observing that sentence, retain the incumbent. Note, however, that there can be no fully separating equilibrium in which each type of judge imposes a unique sentence, a result generalized for different levels of discretion in the following lemma:

**Lemma 2 (Absence of full separation)** *Irrespective of incentives to pander and for any discretionary set  $\hat{S}$ , there exists no fully separating equilibrium.*

**Proof.** See appendix. ■

Given the potential for multiple equilibria, our criterion for selecting among them merits additional discussion. In what follows, we will employ an equilibrium selection criterion we label *minimum pandering*. The basic intuition is that given strong incentives to pander, the most sensible equilibrium is one in which out-of-equilibrium behavior by the judge would be interpreted by the voter as corresponding to equilibrium play in the no-pandering case as given in Table 1. For example, suppose the equilibrium assigns zero probability of retention given an observed sentence of

$s_3$ , and judges are willing to pander to retain office. In such an equilibrium, a sentence of  $s_3$  should never be observed. Minimum pandering suggests that the voter, upon observing that sentence, would infer that the judge is harsh with probability one, because no other type of judge would have either a policy-related or electoral incentive to assign such a high level of punishment. We can therefore eliminate the candidate equilibrium from consideration if the voter is harsh, because such a voter would prefer to retain a judge known to be likeminded.

In some cases, the minimum-pandering equilibrium will be semi-separating, such that voters will adjust their beliefs incrementally given different sentences. In other, more restrictive cases, the minimum pandering equilibrium is characterized by pooling at a single sentence. We also assume a *symmetry condition*: if a judge has the same ideal sentence for two different levels of culpability, his strategy in the minimum pandering equilibrium will place the same (possibly degenerate) probability distribution over sentences for those two levels of culpability.

The value of the minimum pandering criterion is twofold. Most importantly, in practice the criterion selects “natural” equilibria in which the expected sentence is responsive to the judge’s own preferences about sentencing while at the same time positively correlated with the punitiveness of the voter. In the fully specified model with pandering, legislators will take this into account when optimizing over discretionary sets in a way that they could not if they anticipated that all judges would always assign the same sentence in all circumstances (something we do not observe in practice). Second, the criterion can lead to equilibria in which some judges behave as they would absent pandering incentives. In the following section, we will document how legislative incentives can change dramatically given the introduction of incentives for judges to pander. Focusing on equilibria that are most similar to those in the no-pandering case therefore represents a conservative strategy.

Let  $\rho(s_z)$  denote the probability the voter reelects given an observed sentence  $s_z$ , and  $\sigma_{t_j}^{s_z}(k_n)$  the probability a judge of type  $t_j$  imposes a sentence of  $s_z$  given culpability  $k_n$  in the first period.

**Proposition 3 (Ex post review with pandering)** *Suppose  $\hat{S} = \{s_1, s_2, s_3\}$  and  $b > \frac{(2-\delta_j\pi)a}{\delta_j}$ . The following strategy profile and system of beliefs constitute a sequential equilibrium:*

- If  $t_v = H$ 
  - $\sigma_L^{s_1^*}(k) = \frac{1}{4}\forall k$ ;  $\sigma_L^{s_2^*}(k) = \frac{1}{2}\forall k$ ;  $\sigma_L^{s_3^*}(k) = \frac{1}{4}\forall k$ ;
  - $\sigma_M^{s_1^*}(k) = 1$  for  $k \in \{k_1, k_2\}$ ;  $\sigma_M^{s_2^*}(k) = 1$  for  $k \in \{k_3, k_4\}$ ;
  - $\sigma_H^{s_1^*}(k_1) = 1$ ;  $\sigma_H^{s_2^*}(k) = 1$  for  $k \in \{k_2, k_3\}$ ;  $\sigma_H^{s_3^*}(k_4) = 1$ ;
  - $\rho^*(s_1) = \frac{(2b+a)\delta_j-4a}{(2b+a)\delta_j}$ ;  $\rho^*(s_2) = \frac{(2b+a)\delta_j-2a}{(2b+a)\delta_j}$ ;  $\rho^*(s_3) = 1$ ;
- If  $t_v = M$ 
  - $\sigma_L^{s_1^*}(k) = \frac{3}{4}\forall k$ ;  $\sigma_L^{s_2^*}(k) = \frac{1}{4}\forall k$ ;
  - $\sigma_M^{s_1^*}(k) = 1$  for  $k \in \{k_1, k_2\}$ ;  $\sigma_M^{s_2^*}(k) = 1$  for  $k \in \{k_3, k_4\}$ .
  - $\sigma_H^{s_1^*}(k_1) = 1$ ;  $\sigma_H^{s_2^*}(k) = 1$  for  $k \in \{k_2, k_3, k_4\}$ ;
  - $\rho^*(s_1) = \frac{(2b+a)\delta_j-2a}{(2b+a)\delta_j}$ ;  $\rho^*(s_2) = 1$ ;  $\rho^*(s_3) = 0$ ;
- If  $t_v = L$ 
  - $\sigma_L^{s_1^*}(k) = 1\forall k$ ;
  - $\sigma_M^{s_1^*}(k) = 1\forall k$ ;

- $\sigma_H^{s_1^*}(k) = 1 \forall k$ ;
- $\rho^*(s_1) = 1$ ;  $\rho^*(s_2) = 0$ ;  $\rho^*(s_3) = 0$ ;

- All judges assign sentences in the second period per the last column of Table 1;
- Additionally, equilibrium beliefs are formed via Bayes' rule, and out-of-equilibrium beliefs by the minimum pandering criterion, as follows:

	$t_v = H$			$t_v = M$			$t_v = L$		
	$\hat{\pi}_L$	$\hat{\pi}_M$	$\hat{\pi}_H$	$\hat{\pi}_L$	$\hat{\pi}_M$	$\hat{\pi}_H$	$\hat{\pi}_L$	$\hat{\pi}_M$	$\hat{\pi}_H$
$s_1$	$\frac{\pi}{2-2\pi}$	$\frac{2(1-2\pi)}{2-2\pi}$	$\frac{\pi}{2-2\pi}$	$\frac{3\pi}{2}$	$1-2\pi$	$\frac{\pi}{2}$	$\pi$	$(1-2\pi)$	$\pi$
$s_2$	$\pi$	$1-2\pi$	$\pi$	$\frac{\pi}{2}$	$1-2\pi$	$\frac{3\pi}{2}$	$0^\dagger$	$\frac{1-2\pi}{1-\pi}^\dagger$	$\frac{\pi}{1-\pi}^\dagger$
$s_3$	$\frac{1}{2}$	$0$	$\frac{1}{2}$	$0^\dagger$	$0^\dagger$	$1^\dagger$	$0^\dagger$	$0^\dagger$	$1^\dagger$

† denotes minimum pandering out-of-equilibrium beliefs

**Proof.** See appendix. ■

There are several noteworthy characteristics of these equilibria. First, note the correspondence between the voter's retention strategy and punitiveness. Lenient voters only reelect given a sentence of  $s_1$ , moderate voters reelect most frequently given a sentence of  $s_2$ , and harsh voters do so given a sentence of  $s_3$ . Importantly, however, the mixed strategy character of the equilibrium implies that moderate and harsh voters will not replace incumbents with certainty given sentences lower than those that guarantee retention. Were those voters to replace with certainty given a particular sentence, then the equilibrium would collapse, as judges would never assign that sentence.

Second, unlike in the fully pooling equilibria, pandering is sometimes probabilistic. (The minimum pandering equilibrium with  $L$ -type voters is a pooling equilibrium.) For example, the harsh voter's retention strategy will make lenient and harsh judges indifferent between sentencing at their most preferred level and altering their sentence to improve the prospect of reelection. This indifference allows these judges to pander probabilistically to support the voter's indifference between retaining and discarding the incumbent. Note that even though the harsh judge is indifferent at all levels of culpability, the voter's indifference can only be sustained if that judge sentences sincerely.

### 3.3 Optimal Discretion and Voter Behavior

In section 3.1, we outlined how legislators can design constraints on the discretion of trial judges in the absence of ex post review through the imposition of mandatory minimum and maximum sentences. Critically, the most lenient legislators can most easily craft rules to insure that judges do what they want. In the previous section, we considered how judges and voters interact in cases where judges have full discretion.

In this section, we put these pieces together by considering the operation of ex ante constraints and ex post review in tandem. In formulating appropriate constraints on discretion, legislators will now have to take into account their effect on the behavior of both the judge and the voters in a position to retain or replace the judge. Voters, for their part, may make different inferences about the preferences of judges in the presence of those constraints than they did in their absence.

Consider the sequence of events for the full game discussed in Section 2.2. Both judges and voters understand constraints on judicial discretion, and those constraints persist through both periods of the game. Therefore, for each discretionary set  $\hat{S}$ , the strategic interaction between judges and voters is a proper subgame. In choosing the discretionary set, the legislator will choose

among subgames by taking expectations over possible outcomes in each given equilibrium play by judges and voters.

For each pair of legislator and voter types, there are six of these subgames to consider, each corresponding to the feasible discretionary sets. Each of these in turn must be considered in the presence and absence of strong incentives to pander. The full discretion case considered in section 3.2 is one of these subgames. Fortunately, analysis of subgames in which the judge is only permitted to assign a single sentence is trivial: Behavior in each is independent of the judge's incentive to pander or the voter's preferences.

This leaves two remaining subgames to examine fully:  $\hat{S} = \{s_1, s_2\}$ , and  $\hat{S} = \{s_2, s_3\}$ . Here, we describe the broad contours of their equilibria in the presence and absence of strong incentives to pander. Full characterizations are presented in propositions 4 through 7 in the appendix. If the judge is permitted to sentence  $s_1$  or  $s_2$ , absent pandering incentives lenient voters will retain the judge only at  $s_1$ , and moderate and harsh voters only at  $s_2$ . In the presence of pandering incentives, lenient judges retain only at  $s_1$ , causing all judges to pool at that sentence. Both harsh and moderate voters will retain with certainty given a sentence of  $s_2$ , and probabilistically given a sentence of  $s_1$ . In those cases, the lenient judge panders probabilistically to  $s_2$ , while the moderate and harsh judges impose their (constrained) most preferred sentences. If the judge is permitted to sentence  $s_2$  or  $s_3$ , absent pandering incentives the moderate and lenient voters retain incumbents only at  $s_2$ , and the harsh voter only at  $s_3$ . These voter strategies persist in the pandering case, but all judges pool at one or the other sentence depending on the voter's preference.

It is important to note that the conditions governing insufficient incentives to pander and strong incentives to pander differ depending on the subgame. Because constraints on discretion make ideologically disparate judges sentence more similarly than they would given full discretion, the stakes associated with losing office are lowered. It is easy to demonstrate that if the conditions that govern pandering in the full discretion subgame are met they will also be met in the other subgames as well, so we adopt them in what follows.

**Case 1. Optimal legislative constraints given no pandering.** Having fully characterized equilibria in each subgame, it is possible to calculate the expected value to the legislator of each subgame. Absent pandering, this involves calculating the expected loss to the judge associated with sincere sentencing by the judge in the first round, and anticipating the voter's response to this sentencing and its implications for the distribution of judges in the second. If the voter replaces the judge, the expected value of the second period corresponds to a random draw from the prior distribution of judges. If the voter retains the judge, the expected value corresponds to the posterior distribution given the observed sentence. When the discretionary set permits only one sentence, the voter's decision whether to retain or replace is immaterial from the perspective of the legislator. We present the expected values in tabular form in Table 2. From these, determining which discretionary set maximizes the legislator's utility involves a straightforward comparison of those values.

**Proposition 8 (Ex ante constraints in the absence of judicial pandering to voters)** *Suppose  $b < \frac{(2-\delta_j)a}{2\delta_j}$ . The following strategy profile and system of beliefs constitute a sequential equilibrium: (a) Judges in both periods assign sentences per Table 1. (b) Voter strategies and posterior beliefs in each subgame are those described in proposition 2 and propositions 4 and 6 in the appendix; (c)  $\hat{S}^* = \{s_1\}$  if  $t_c = L$ ;  $\hat{S}^* = \{s_1, s_2\}$  if  $t_c = M$ ;  $\hat{S}^* = \{s_2, s_3\}$  if  $\delta_c < \frac{4}{1+\pi}$ ,  $t_c = H$ , and  $t_v = H$ ;  $\hat{S}^* = \{s_2, s_3\}$  if  $\delta_c < \frac{4}{1-\pi}$ ,  $t_c = H$ , and  $t_v = M$ ;  $\hat{S}^* = \{s_1, s_2, s_3\}$  if  $\delta_c > \frac{4}{1+\pi}$ ,  $t_c = H$ , and  $t_v = H$ ; and  $\hat{S}^* = \{s_1, s_2, s_3\}$  if  $\delta_c > \frac{4}{1-\pi}$ ,  $t_c = H$ , and  $t_v = M$ .*

Restricting attention to the moderate and lenient legislators, it is apparent that the constraints

Table 2: Legislator's Expected Utilities to Different Discretionary Ranges for Different Voters in the Absence of Sufficient Incentives to Pander

$$\hat{S} =$$

$t_c$	$t_v$	$\{s_1\}$	$\{s_2\}$	$\{s_3\}$	$\{s_1, s_2\}$	$\{s_2, s_3\}$	$\{s_1, s_2, s_3\}$
L	L	0	$-(1 + \delta_c)a$	$-(1 + \delta_c)2a$	$-\frac{a(2-\pi)}{4} - \delta_c \frac{a(8-9\pi+\pi^2)}{16}$	$-\frac{a(4+\pi)}{4} - \delta_c \frac{a(16+3\pi+\pi^2)}{16}$	$-\frac{a}{2} - \delta_c \frac{a(4-3\pi)}{8}$
L	M	0	$-(1 + \delta_c)a$	$-(1 + \delta_c)2a$	$-\frac{a(2-\pi)}{4} - \delta_c \frac{a(8+\pi-\pi^2)}{16}$	$-\frac{a(4+\pi)}{4} - \delta_c \frac{a(16+3\pi+\pi^2)}{16}$	$-\frac{a}{2} - \delta_c \frac{a(2+\pi)}{4}$
L	H	0	$-(1 + \delta_c)a$	$-(1 + \delta_c)2a$	$-\frac{a(2-\pi)}{4} - \delta_c \frac{a(8+\pi-\pi^2)}{16}$	$-\frac{a(4+\pi)}{4} - \delta_c \frac{a(16+5\pi-\pi^2)}{16}$	$-\frac{a}{2} - \delta_c \frac{a(4+3\pi)}{8}$
M	L	$-(1 + \delta_c)\frac{a}{2}$	$-(1 + \delta_c)\frac{a}{2}$	$-(1 + \delta_c)\frac{3a}{2}$	$-\frac{3a\pi}{4} - \delta_c \frac{3a\pi(5-\pi)}{16}$	$-\frac{a(2+\pi)}{4} - \delta_c \frac{a(8+3\pi+\pi^2)}{16}$	$-\pi a - \delta_c \frac{a\pi(9-2\pi)}{8}$
M	M	$-(1 + \delta_c)\frac{a}{2}$	$-(1 + \delta_c)\frac{a}{2}$	$-(1 + \delta_c)\frac{3a}{2}$	$-\frac{3a\pi}{4} - \delta_c \frac{3a\pi(3+\pi)}{16}$	$-\frac{a(2+\pi)}{4} - \delta_c \frac{a(8+3\pi+\pi^2)}{16}$	$-\pi a - \delta_c \frac{a\pi(3+2\pi)}{4}$
M	H	$-(1 + \delta_c)\frac{a}{2}$	$-(1 + \delta_c)\frac{a}{2}$	$-(1 + \delta_c)\frac{3a}{2}$	$-\frac{3a\pi}{4} - \delta_c \frac{3a\pi(3+\pi)}{16}$	$-\frac{a(2+\pi)}{4} - \delta_c \frac{a(8+5\pi-\pi^2)}{16}$	$-\pi a - \delta_c \frac{a\pi(7+2\pi)}{8}$
H	L	$-(1 + \delta_c)a$	$-(1 + \delta_c)\frac{a}{2}$	$-(1 + \delta_c)a$	$-\frac{a(2+\pi)}{4} - \delta_c \frac{a(8+9\pi-\pi^2)}{16}$	$-\frac{a(2-\pi)}{4} - \delta_c \frac{a(8-3\pi-\pi^2)}{16}$	$-\frac{a}{2} - \delta_c \frac{a(4+3\pi)}{8}$
H	M	$-(1 + \delta_c)a$	$-(1 + \delta_c)\frac{a}{2}$	$-(1 + \delta_c)a$	$-\frac{a(2+\pi)}{4} - \delta_c \frac{a(8-\pi+\pi^2)}{16}$	$-\frac{a(2-\pi)}{4} - \delta_c \frac{a(8-3\pi-\pi^2)}{16}$	$-\frac{a}{2} - \delta_c \frac{a(2-\pi)}{4}$
H	H	$-(1 + \delta_c)a$	$-(1 + \delta_c)\frac{a}{2}$	$-(1 + \delta_c)a$	$-\frac{a(2+\pi)}{4} - \delta_c \frac{a(8-\pi+\pi^2)}{16}$	$-\frac{a(2-\pi)}{4} - \delta_c \frac{a(8-5\pi+\pi^2)}{16}$	$-\frac{a}{2} - \delta_c \frac{a(4-3\pi)}{8}$

they impose on judges are unresponsive to the existence of ex post review or the preferences of voters. As in our examination of ex ante constraints in isolation, the lenient legislator can always get her way by insisting that the judge impose  $s_1$  under all circumstances, making voters superfluous irrespective of their preferences toward punishment. As before, the moderate raises the maximum sentence to  $s_2$ . However, a straightforward comparison of the quantities in Table 2 reveals that the expected value to the moderate legislator of the judicial system differs depending on the presence or absence of ex post review.

**Remark 3 (Induced moderate attitudes toward judicial election)** *The moderate legislator benefits from the existence of ex post oversight if  $t_v = M$  or  $t_v = H$ , but would prefer no ex post oversight if  $t_v = L$ .*

This is reminiscent of the “ally principle” in standard delegation models, which suggests that principals are likely to give greater discretion to agents who share their preferences. The principle embedded in Remark 3 is similar, though the causal mechanism is somewhat more subtle. In this model, the legislator and the voter both serve as principals to the judge. By virtue of moving first, however, the legislator behaves (somewhat counterintuitively) as the voter’s principal. If the legislator is moderate but the voter is lenient, the legislator, if she could, would prefer denying the voter the chance to review judges ex post. Note, however, that the result is not symmetric. Because the lenient legislator can effectively control all types of judges through strong ex ante constraints, it is immaterial to her whether the voter exercises ex post review or not.

**Remark 4 (Conditionality of harsh legislator’s strategy in the absence of pandering)** *Absent sufficient incentives for judges to pander, the harsh legislator’s optimal range of judicial discretion is weakly increasing in the extent to which she values the future.<sup>3</sup>*

The harsh legislator’s equilibrium strategy is perhaps the most interesting because it varies depending on her own preferences and those of the voter. If the harsh legislator discounts the future sufficiently, then the benefit of preventing insufficiently punitive sentences in the first round dominates her thinking, and she tailors the judge’s discretion as she would in the absence of ex post review. If the future weighs sufficiently importantly, however, the harsh legislator’s incentives change. To be sure, by increasing judicial discretion she increases the chance that lenient judges will sentence too lightly in the first round. However, increasing judicial discretion also enhances the ability of a likeminded voter to discard ideologically disparate (i.e. lenient) judges. If the legislator values the future sufficiently highly, the benefit of ex post review will make expanding the judge’s discretion worthwhile. Note also that the harsh legislator must value the future even more highly to expand discretion given a moderate voter than given a harsh voter. Finally, the harsh legislator will never increase discretion in the presence of a lenient voter.

**Case 2. Legislative constraints in the presence of pandering.** Finally, we consider the legislator’s decision concerning judicial discretion in the presence of ex post review by voters and pandering behavior by judges. Table 3 presents the discounted expected value to the legislator for the equilibria of each subgame discussed above and in the appendix.

**Proposition 9 (Ex ante constraints in the presence of judicial pandering to voters)** *Suppose  $b > \frac{(2-\delta_j\pi)a}{\delta_j}$ . The following strategy profile and system of beliefs constitute a sequential equilibrium:*

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<sup>3</sup>Readers who object that  $\delta_c$  must be unreasonably high to induce this sort of behavior should keep in mind that the second period of the model represents a reduced form for the continuation value of game played over many periods. Therefore, it is unreasonable to presume that  $\delta_i$  is bounded between zero and one for any actor.

Table 3: Legislator's Expected Utilities to Different Discretionary Ranges for Different Voters in the Presence of Sufficient Incentives to Pander

$$\hat{S} =$$

$t_c$	$t_v$	$\{s_1\}$	$\{s_2\}$	$\{s_3\}$	$\{s_1, s_2\}$	$\{s_2, s_3\}$	$\{s_1, s_2, s_3\}$
L	L	0	$-(1 + \delta_c)a$	$-(1 + \delta_c)2a$	$-\frac{a\delta_c(2-\pi)}{4}$	$-\frac{a(4+\delta_c(4+\pi))}{4}$	$-\frac{a\delta_c}{2}$
L	M	0	$-(1 + \delta_c)a$	$-(1 + \delta_c)2a$	$-\frac{a(4-5\pi+\delta_c(4-\pi+3\pi^2))}{8-12\pi}$	$-\frac{a(4+\delta_c(4+\pi))}{4}$	$-\frac{a(1+\delta_c)}{2}$
L	H	0	$-(1 + \delta_c)a$	$-(1 + \delta_c)2a$	$-\frac{a(4+\delta_c(-2+\pi)^2+\pi)}{4(2-\pi)}$	$-\frac{a(8+\delta_c(4+\pi))}{4}$	$-\frac{a(1+\delta_c+2\pi)}{2}$
M	L	$-(1 + \delta_c)\frac{a}{2}$	$-(1 + \delta_c)\frac{a}{2}$	$-(1 + \delta_c)\frac{3a}{2}$	$-\frac{a(2+3\delta_c\pi)}{4}$	$-\frac{a(2+3\delta_c\pi)}{4}$	$-\frac{a(1+2\delta_c\pi)}{2}$
M	M	$-(1 + \delta_c)\frac{a}{2}$	$-(1 + \delta_c)\frac{a}{2}$	$-(1 + \delta_c)\frac{3a}{2}$	$-\frac{3a(1+\delta_c)\pi}{4}$	$-\frac{a(2+\delta_c(2+\pi))}{4}$	$-\frac{a(3+4\delta_c)\pi}{4}$
M	H	$-(1 + \delta_c)\frac{a}{2}$	$-(1 + \delta_c)\frac{a}{2}$	$-(1 + \delta_c)\frac{3a}{2}$	$-\frac{a(3(1+\delta_c)\pi)}{4}$	$-\frac{a(6+\delta_c(2+\pi))}{4}$	$-\frac{a(5+4\delta_c)\pi}{4}$
H	L	$-(1 + \delta_c)a$	$-(1 + \delta_c)\frac{a}{2}$	$-(1 + \delta_c)a$	$-\frac{a(4+\delta_c(2+\pi))}{4}$	$-\frac{a(2+\delta_c(2-\pi))}{4}$	$-\frac{a(2+\delta_c)}{2}$
H	M	$-(1 + \delta_c)a$	$-(1 + \delta_c)\frac{a}{2}$	$-(1 + \delta_c)a$	$-\frac{a(8-11\pi-3\pi^2+\delta_c(8-8\pi-6\pi^2))}{8(2-3\pi)}$	$-\frac{a(2+\delta_c(2-\pi))}{4}$	$-\frac{a(4+4\delta_c-\pi)}{8}$
H	H	$-(1 + \delta_c)a$	$-(1 + \delta_c)\frac{a}{2}$	$-(1 + \delta_c)a$	$-\frac{a(8-5\pi-\pi^2+2\delta_c(4-\pi^2))}{8(2-\pi)}$	$-\frac{a(4+\delta_c(2-\pi))}{4}$	$-\frac{a(2+2\delta_c-\pi)}{4}$

(a) Judges and voter strategies, and voter posterior beliefs in each subgame are those described in proposition 3 and propositions 5 and 7 in the appendix; (b)  $\hat{S}^* = \{s_1\}$  if  $t_c = L$ ;  $\hat{S}^* = \{s_1, s_2\}$  if  $t_c = M$ ;  $\hat{S}^* = \{s_2, s_3\}$  if  $\delta_c > \frac{\pi+2}{\pi}$ ,  $t_c = H$ , and  $t_v = H$ ;  $\hat{S}^* = \{s_2, s_3\}$  if  $\delta_c > \frac{1}{2}$ ,  $t_c = H$ , and  $t_v = M$ ;  $\hat{S}^* = \{s_1, s_2, s_3\}$  if  $\delta_c < \frac{\pi+2}{\pi}$ ,  $t_c = H$ , and  $t_v = H$ ; and  $\hat{S}^* = \{s_1, s_2, s_3\}$  if  $\delta_c > \frac{1}{2}$ ,  $t_c = H$ , and  $t_v = M$ .

Taking propositions 8 and 9 together, we observe that changing the incentives of the judge has no tangible effect on the strategy of the moderate or lenient legislator. A cursory glance at the harsh legislator's strategies suggests similarity as well. Closer inspection, however, reveals that the incentives governing the harsh legislator's decision to expand or contract discretion in response to ex post review are dramatically different when judges themselves have incentives to pander to retain office.

**Remark 5 (Conditionality of harsh legislator's strategy in the presence of pandering)**

*Given strong incentives for judges to pander, the harsh legislator's optimal range of judicial discretion is weakly decreasing in the extent to which she values the future.*

In the absence of judicial pandering the harsh legislator expands discretion when the future looms large; in the presence of pandering, the harsh legislator expands discretion when the future looms *small*. What accounts for this difference? The answer concerns both the distortions in the behavior of judges corresponding to electoral incentives and the ability of voters to make inferences about judges' preferences given those distortions. Because voters will have a difficult time distinguishing judges in the presence of pandering, the distribution of judges sentencing in the second period will (in expectation) resemble the prior distribution, irrespective of whether the voter retains the incumbent at the end of the first. Thus, sentencing in the second round of the game with pandering will resemble sentencing in the first round of the game without it. By the same token, the strategic behavior of judges given pandering incentives implies that first-round sentencing in that game will resemble second-round sentencing by the filtered set of judges in the no-pandering case. These reversals produce the switch in the relationship between the legislator's choice and her time preferences.

## 4 Discussion

### 4.1 Extensions and Robustness

Here, we consider how, and with what consequences, one might incorporate other salient features of the judicial system and the politics surrounding it, into our model. First, it might be appropriate to consider other constraints on the discretion of lower court judges aside from mandatory minimum and maximum sentences. For example, we have set aside sentencing guidelines, an increasingly popular way to regulate the behavior of judges in the states and at the federal level. Guideline regimes suggest different ranges of punishments within the judge's statutory discretion for a particular crime are appropriate for different categories of convicted felons. A range is generally determined by the severity of the particular criminal act, the prior criminal history of the defendant, and mitigating or aggravating circumstances. Although guideline regimes vary in the extent to which they are binding on judges, all guidelines effectively seek to partition the culpability space by relying on easily observable indicia such as the length of a prior record or whether the

victim was a government official or child.<sup>4</sup>

If culpability were fully observable, then legislators or sentencing commissions could write guidelines sufficiently detailed to eliminate all judicial deviations from their preferred sentences. Assuming that guidelines could only imperfectly distinguish among defendants with different levels of culpability, however, the basic institution of our model survives. Because lenient legislators' preferred sentences are relatively unresponsive to changes in defendant culpability, they would be unconcerned with inadvertently misclassifying defendants on the basis of their culpability. For reasonable levels of error-proneness, conservative and moderate legislators would nonetheless still be made better off with imperfect guidelines than with uniform minimum and maximum sentences for particular crimes. This sentiment seems to be reflected in the current politics of sentencing guidelines, where liberals have argued that reformers were "duped" by conservatives into accepting a system that makes it possible to "ratchet up" penalties to fit conservative sentiments (Greenberg and Humphries 1980; von Hirsch and Greene 1993).

Second, we have made assumptions about the distribution of judge ideology (lenient and punitive judges equally likely) and defendant culpability (uniform). Changing the shape of these distributions would result in different point predictions, but there is no reason to suspect that the direction of our comparative static results would change. More interesting is the lower boundary of the culpability distribution, and what it says about the trial process. In reality, trial judges are not presented with a random draw of defendants, a quarter of whom have very low culpability. Most cases are settled via plea bargain *subject to the final approval of the presiding judge*, or via jury trial. The process of arriving at guilty verdicts and pleas affords a critical gatekeeping role for the prosecuting attorney (who can decline to prosecute) and the jury (which can acquit). Together, prosecutorial discretion and acquittals imply that the distribution of defendants may be truncated somewhere above zero, and perhaps above the lowest level of culpability in our model.<sup>5</sup> At the very least, however, removing the least culpable offenders would mitigate, to some degree, both (1) the loss felt by conservative legislators associated with removing discretion to sentence at the lowest level and (2) the voter's inability to differentiate leniency from inculpability. As long as some lenient judges would still pool with their more punitive counterparts, however, the basic intuition regarding voter updating would remain.

Third, our model considers the electoral connection between the voter and the judge, but abstracts away from the connection between the voter and the legislator. Such an assumption is justified if, as we discuss above, specific groups exercise a disproportionate influence in different policy domains, or if judges are reviewed by other officials and not the electorate. Still, it is worthwhile to explore how the model could be extended if voters chose which legislator they would prefer to set sentencing discretion. Not surprisingly, they would be best off selecting likeminded legislators if they agreed on how much to value the future. (A similar dynamic would emerge if voters acknowledge that they were unable to monitor judges, and instead delegated authority to legislators alone to set restrictions on discretion, choosing to retain judges in the absence of any major scandal.)

More interesting, however, is legislative choice of judicial discretion in the presence of district heterogeneity. Suppose a state has several districts, each of whose voters elects a likeminded individual to represent them in the legislature. Because crime has negative spillover effects, punishment

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<sup>4</sup>Mandatory sentencing enhancements, for example those that require an additional sentence for a convict shown to have used a firearm in the commission of a crime, are somewhat different, in that they require (post *United States v. Booker*) a jury determination of additional facts.

<sup>5</sup>Moreover, in the shadow of legislative guidelines or an ideologically extreme judge, juries and prosecutors with preferences over punishment might on occasion prefer dropping a case or acquitting a defendant to giving the judge discretion over sentences. A more comprehensive account might incorporate jury nullification as a possible outcome.

in one district is of concern to the citizens of another. In order to form a preference ranking of different discretionary sets, legislators must therefore take weighted averages of the expected utilities displayed in Tables 2 and 3. Suppose the legislature was dominated by a majority coalition of representatives from harsh districts. If crime were evenly distributed throughout the state, members of the coalition might support increasing judicial discretion, for example, to take advantage of the ability of likeminded voters across districts to replace insufficiently punitive judges. If, on the other hand, crime were concentrated in a district composed disproportionately of relatively lenient voters (for example, a large urban area), members of the coalition might not support such a move, because they could not rely on voters from that district to remove judges on account of perceived leniency. More generically, in the absence of a majority of any one type of legislator and in the presence of spillovers, a majority rule equilibrium may not exist because preferences over different discretionary sets may not be single-peaked. (These possibilities echo those discussed in the models of federal mandates considered by Cr mer and Palfrey [2000, 2002].)

Fourth, while the substantive focus of this paper has been the control of lower court judges, the framework can be adapted to similar problems of common agency in which one principal controls discretion *ex ante* while another controls selection *ex post*. Other political and economic relationships have a similar structure: In government, political appointees that serve at the pleasure of the President are constrained by the legislature. Other executive officials such as states attorneys general and public utility commissioners are reviewed by voters. In the marketplace, the esteem with which publicly owned companies are held by investors depends in part on the government regulations they may be subjected to. In education, the signaling value of a diploma to a potential employer depends, in part, on the requirements necessary to obtain it.

## 4.2 Existing Debates and Empirical Implications

Our research sheds light on existing political debates regarding the limits of discretion, while at the same time pointing toward empirical tests of the model’s predictions. Efforts to control judges have been criticized by a diverse array of legal scholars and judges (Dagger 1993; Croley 1995; De Muniz 2002). While liberals have attacked the punitiveness of formal constraints on judicial discretion, particularly mandatory minimum sentences, these reforms have also attracted criticism from conservative jurists whom one would expect are inclined to support more severe punishments. In his year-end 2003 report on the state of the federal judiciary, for example, former Chief Justice Rehnquist criticized Congress for its passage of the PROTECT Act, which, among other measures, sought to reduce the ability of judges to “downwardly depart” from federal sentencing guidelines. The Chief Justice wrote, “Judges have an institutional commitment to the independent administration of justice and are able to see the consequences of judicial reform proposals that legislative sponsors may not be in a position to see.” Similarly, former US District Court Judge John S. Martin, appointed by President G.H.W. Bush, wrote in 1993 that “For a judge to be deprived of the ability to consider all of the factors that go into formulating a just sentence is completely at odds with the sentencing philosophy that has been a hallmark of the American system of justice.”

At the heart of both criticisms is the fact that while conservatives may fear judicial leniency in some circumstances, conservative judges nonetheless desire to retain the authority to assign lenient sentences to defendants when they feel it is appropriate. This preference emerges because of a recognition that culpability varies even among convicted defendants, and a proportional response requires that the least culpable be punished least. As we have pointed out, however, the most lenient judges need not confront the same tradeoff when considering mandatory maximums; these constraints will not be binding on them if they believe that no level of culpability warrants a

punishment in excess of what the statute permits.

Finally, the theoretical framework presented here suggests a number of predictions amenable to empirical testing. The first concerns attitudes toward constraints on judicial discretion. If our model accurately captures preferences, we should expect that while lenient officials and citizens may dislike mandatory minimums and their harsh counterparts dislike mandatory maximums, the latter will express more displeasure with minimums than the former do with maximums.

The second set of predictions concerns the relationship between the voter and the judge. If judges pander to retain office, we should observe a relationship between the punitiveness of voters in a jurisdiction and the average severity of sentences there, *ceteris paribus*. Further, if the minimum pandering equilibria describe reality well, the *variance* of sentences in jurisdictions with more punitive voters should exceed that in jurisdictions with more lenient ones. In the former, judges will sentence with positive probability across the discretionary range, while in the latter, they risk being replaced if they sentence too punitively. Lastly, the model suggests that the nature of voter response to observed sentences is contingent on the willingness of judges to pander to retain office. If judges do not pander to retain office, we predict voters will punish judges for sentences they perceive as out of line with their preferences. However, if judges are willing to alter their behavior to retain office, *there may be no observable empirical relationship between judicial behavior and voter response*. In other words, a finding that voters seem automatically to retain incumbent judges cannot be interpreted as evidence that judges operate in a sphere of autonomy with no concern about the electoral repercussions of their actions.

The third set of predictions concerns the imposition of constraints on judicial discretion. The model predicts that the range of feasible sentences (the distance between the maximum penalty for a crime and the minimum) should increase with the punitiveness of the legislature. Further, in punitive jurisdictions where judges face *ex post* review, discretion may be larger than in ideologically similar jurisdictions where judges have tenure. In more lenient jurisdictions, by contrast, there should be no relationship between judicial discretion and the presence of *ex post* review.

## 5 Conclusion

In this paper, we have argued that existing models of political delegation are inadequate to address the control of lower court judges in the United States. This inadequacy stems from two sources: the nature of preferences about judging and the fact that lower court judges are simultaneously subject to legislated *ex ante* constraints and review *ex post* by voters or other officials. We have demonstrated that these two phenomena have important implications for understanding judicial politics and the institutional environment in which judges operate.

First, we have shown that it is difficult to speak of the politics surrounding judicial behavior without considering how *ex ante* constraints and *ex post* review interact. Even if judges do not care about the political implications of their decisions, we have established that the inferences voters can make about judicial ideology on the basis of sentencing are fundamentally different in the presence of *ex ante* constraints than in their absence. Consequently, *ex ante* constraints do more than alter the payoffs associated with the sentencing behavior of judges and their potential replacements. They can also alter the willingness of voters to replace incumbent judges.

Second, we show that conservatives face a much thornier task than liberals in constraining ideologically distant jurists. In light of our model, it is not surprising that conservatives seem to complain about the abuse of judicial discretion more than liberals do. As we have shown, liberals can control conservatives relatively easily (and costlessly) by placing binding upper boundaries on sentencing or by discarding judges who assign sentences that are too high in the absence of these

rules. In contrast, conservatives face a double bind: In setting mandatory minima, they face a tradeoff between the desire to punish proportionally and the fear that liberal judges will sentence too leniently. In evaluating judicial behavior ex post, they also have a harder time inferring a judge is too lenient than liberals do in deciding a judge is too punitive.

Although the simultaneous presence of ex ante constraints on discretion and review by ideologically like-minded voters mitigates the difficulty of conservatives, the key to this improvement is the existence of relatively high mandatory minimum sentences that bind even conservative judges with some frequency. It is not surprising, therefore, that even conservative jurists disapprove of binding, punitive guidelines. But conservative legislators have a different game in mind. They are worried about sentencing by more liberal judges, and not the Rehnquists and Martins on the bench.

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## Appendix

### Proof of Proposition 1

In periods 1 and 2 the judge's best response is to assign the loss-minimizing sentence. The legislator chooses  $\hat{S}$  to maximize (2) given the judge's expected response. The lenient legislator always prefers a sentence of  $s_1$ , thus she can achieve her ideal in all possible states of the world by imposing  $\hat{S}^* = \{s_1\}$ . It also follows immediately that for the moderate legislator, all  $\hat{S}$  containing  $s_3$  as a member are dominated by those that do not. Given the assumptions detailed in the text,

$$\begin{aligned} E[U_c(\hat{S} = \{s_1\}|t_c = M, \cdot)] &= -(1 + \delta_c)\frac{a}{2} \\ E[U_c(\hat{S} = \{s_2\}|t_c = M, \cdot)] &= -(1 + \delta_c)\frac{a}{2} \\ E[U_c(\hat{S} = \{s_1, s_2\}|t_c = M, \cdot)] &= -(1 + \delta_c)\frac{3\pi a}{4}. \end{aligned}$$

By assumption,  $\pi < \frac{1}{2}$ , implying  $E[U_c(\hat{S} = \{s_1, s_2\}|t_c = M, \cdot)] > -(1 + \delta_c)\frac{3a}{8}$ . Thus, the moderate legislator strictly prefers  $\hat{S}^* = \{s_1, s_2\}$ .

For the harsh legislator, it is immediately apparent that all  $\hat{S}$  that include  $s_3$  dominate all others, because only like-minded judges will ever wish to employ that sentence. Therefore, the relevant expected utilities are:

$$\begin{aligned}
E[U_c(\hat{S} = \{s_3\}|t_c = H, \cdot)] &= -(1 + \delta_d)a \\
E[U_c(\hat{S} = \{s_2, s_3\}|t_c = H, \cdot)] &= -(1 + \delta_d)\frac{a(2 - \pi)}{4} \\
E[U_c(\hat{S} = \{s_1, s_2, s_3\}|t_c = H, \cdot)] &= -(1 + \delta_d)\frac{a}{2}.
\end{aligned}$$

The largest of these three quantities is  $E[U_c(\hat{S} = \{s_2, s_3\}|t_c = H, \cdot)]$  for all  $\pi \in (0, \frac{1}{2})$ . ■

## Proof of Proposition 2

Given the posterior probabilities detailed in the text, it is straightforward to derive the expected utility to the voter of retaining given an observed sentence and to compare that with the expected utility of discarding the incumbent judge in favor of a new draw.

**Harsh voter:**

$$\begin{aligned}
E[u_v(R = 0|t_v = H, \hat{S} = \{s_1, s_2, s_3\})] &= -\delta_v\frac{a}{2} \\
E[u_v(R = 1|t_v = H, \hat{S} = \{s_1, s_2, s_3\}, s = s_1)] &= -\delta_v\frac{a + 2a\pi}{2 + \pi} \\
E[u_v(R = 1|t_v = H, \hat{S} = \{s_1, s_2, s_3\}, s = s_2)] &= -\delta_v\frac{a(1 - 2\pi)}{2 - 2\pi} \\
E[u_v(R = 1|t_v = H, \hat{S} = \{s_1, s_2, s_3\}, s = s_3)] &= 0
\end{aligned}$$

**Moderate voter:**

$$\begin{aligned}
E[u_v(R = 0|t_v = M, \hat{S} = \{s_1, s_2, s_3\})] &= -\delta_v\pi a \\
E[u_v(R = 1|t_v = M, \hat{S} = \{s_1, s_2, s_3\}, s = s_1)] &= -\delta_v\frac{5a\pi}{4 + 2\pi} \\
E[u_v(R = 1|t_v = M, \hat{S} = \{s_1, s_2, s_3\}, s = s_2)] &= -\delta_v\frac{a\pi}{2 - 2\pi} \\
E[u_v(R = 1|t_v = M, \hat{S} = \{s_1, s_2, s_3\}, s = s_3)] &= -\delta_v\frac{a}{2}
\end{aligned}$$

**Lenient voter:**

$$\begin{aligned}
E[u_v(R = 0|t_v = L, \hat{S} = \{s_1, s_2, s_3\})] &= -\delta_v\frac{a}{2} \\
E[u_v(R = 1|t_v = L, \hat{S} = \{s_1, s_2, s_3\}, s = s_1)] &= -\delta_v\frac{a(1 - \pi)}{2 + \pi} \\
E[u_v(R = 1|t_v = L, \hat{S} = \{s_1, s_2, s_3\}, s = s_2)] &= -\delta_v\frac{a}{2 - 2\pi} \\
E[u_v(R = 1|t_v = L, \hat{S} = \{s_1, s_2, s_3\}, s = s_3)] &= -\delta_v a
\end{aligned}$$

The induced preferences for the actions listed in the proposition are immediately apparent by comparison of the relevant quantities. ■

## Proof of Lemma 2

Suppose  $\hat{S} = \{s_1, s_2, s_3\}$ . Absent incentives to pander, the sentences of moderate and harsh judges will vary depending on culpability. In the presence of strong incentives to pander, given a harsh voter, lenient judges have an incentive to pool with moderate and harsh judges; given a moderate voter, both lenient and harsh judges have an incentive to pool with moderate judges; and given a lenient voter, harsh judges have an incentive to pool with moderate and lenient judges – all contradictions of full separation. If  $\hat{S} \neq \{s_1, s_2, s_3\}$ , full separation is impossible because there are fewer feasible sentences than types,  $|\hat{S}| < |T|$ . ■

## Proof of Proposition 3

**Harsh voter.** From lemma 1, lenient and harsh judges have the strongest incentive to pander. In the minimum pandering equilibrium, (a) the voter strategy will make both types of judges indifferent between not pandering, pandering one step, and pandering two steps. This indifference implies that the moderate judge strictly prefers not to pander, and implements his preferred sentence. Likewise, (b) lenient and harsh judges' strategies will make voters indifferent between retaining and not retaining given observed sentences. The indifference conditions corresponding to (a) are given by

$$\begin{aligned} \rho(s_1)\delta_j b - (1 - \rho(s_1))\delta_j \left(\frac{a}{2}\right) &= \rho(s_2)\delta_j b - (1 - \rho(s_2))\delta_j \left(\frac{a}{2}\right) - a \\ \rho(s_2)\delta_j b - (1 - \rho(s_2))\delta_j \left(\frac{a}{2}\right) - a &= \rho(s_3)\delta_j b - (1 - \rho(s_3))\delta_j \left(\frac{a}{2}\right) - 2a, \end{aligned} \quad (3)$$

or

$$\rho(s_2) = \frac{\rho(s_3)((2b + a)\delta_j) - 2a}{(2b + a)\delta_j} \quad (4)$$

$$\rho(s_1) = \frac{\rho(s_3)((2b + a)\delta_j) - 4a}{(2b + a)\delta_j}. \quad (5)$$

Note that  $\rho(s_1) < \rho(s_2)$ . For  $\rho(s_1) \geq 0$ , it must be the case that

$$b \geq \frac{\left(2 - \frac{\rho(s_3)}{2}\delta_j\right)a}{\delta_j}, \quad (6)$$

assuming  $\rho(s_3) > 0$ . But by the assumption of strong incentives to pander,  $b > \frac{(2 - \delta_j \pi)a}{\delta_j}$ . Thus (6) holds irrespective of the value of  $\pi$  only if  $\rho(s_3) = 1$ . Substituting into (4) and (5) gives the expressions in the text.

Turning to (b), note that the posterior probability distribution over judge types given an observed sentence of  $s_z$  is given by

$$\begin{aligned}
\hat{\pi}_L(s_z|\hat{S}) &= \frac{\pi \sum_k \sigma_L^{s_z}(k)}{\pi \sum_k \sigma_L^{s_z}(k) + (1 - 2\pi) \sum_k \sigma_M^{s_z}(k) + \pi \sum_k \sigma_H^{s_z}(k)} \\
\hat{\pi}_M(s_z|\hat{S}) &= \frac{(1 - 2\pi) \sum_k \sigma_M^{s_z}(k)}{\pi \sum_k \sigma_L^{s_z}(k) + (1 - 2\pi) \sum_k \sigma_M^{s_z}(k) + \pi \sum_k \sigma_H^{s_z}(k)} \\
\hat{\pi}_H(s_z|\hat{S}) &= \frac{\pi \sum_k \sigma_H^{s_z}(k)}{\pi \sum_k \sigma_L^{s_z}(k) + (1 - 2\pi) \sum_k \sigma_M^{s_z}(k) + \pi \sum_k \sigma_H^{s_z}(k)}.
\end{aligned} \tag{7}$$

The voter is indifferent between retaining and replacing if

$$\frac{a}{2} = \frac{a\pi \sum_k \sigma_L^{s_z}(k) + \frac{a}{2}(1 - 2\pi) \sum_k \sigma_M^{s_z}(k)}{\pi \sum_k \sigma_L^{s_z}(k) + (1 - 2\pi) \sum_k \sigma_M^{s_z}(k) + \pi \sum_k \sigma_H^{s_z}(k)} \quad \forall z,$$

which simplifies to  $\sum_k \sigma_L^{s_z}(k) = \sum_k \sigma_H^{s_z}(k)$ . The judge strategies given in the proposition satisfy minimum pandering, symmetry across culpability levels, and  $\sigma_{t_j}^{s_z}(k) \in [0, 1] \forall t_j, s_z, k$ . Substituting the judges' equilibrium strategies into (7) and the analogous expressions for moderate and harsh judges give the beliefs denoted in the table.

**Moderate voter.** Absent sufficient incentives to be retained, only harsh judges would ever sentence at  $s_3$ . In the minimum pandering equilibrium, a moderate voter would therefore infer that an observed sentence of  $s_3$  corresponds to a  $H$ -type judge, who, ceteris paribus, the voter would prefer to replace. As above,  $L$ - and  $H$ -type judges are indifferent between not pandering and pandering one step (because  $\rho(s_3) = 0$ , there are no opportunities to pander two steps). The judge's indifference condition is given by the first line of (3). The expressions for  $\rho(s_1)$  and  $\rho(s_2)$  given in the text satisfy this condition. (Note that there exist equilibria in which both  $\rho(s_1)$  and  $\rho(s_2)$  are non-degenerate probabilities; we focus on the equilibrium in which  $\rho(s_2) = 1$  for comparability with the  $t_v = H$  case.)

The moderate voter's indifference conditions are given by

$$\pi a = \frac{\frac{\pi a}{2} (\sum_k \sigma_L^{s_z}(k) + \sum_k \sigma_H^{s_z}(k))}{\pi \sum_k \sigma_L^{s_z}(k) + (1 - 2\pi) \sum_k \sigma_M^{s_z}(k) + \pi \sum_k \sigma_H^{s_z}(k)} \quad \text{for } z = 1, 2,$$

which simplifies to  $2 \sum_k \sigma_M^{s_z}(k) = \sum_k \sigma_L^{s_z}(k) + \sum_k \sigma_H^{s_z}(k)$  at  $s_1$  and  $s_2$ . As with the harsh voter case, judicial strategies given in the text satisfy this condition and yield the beliefs given in the table.

**Lenient voter.** Absent sufficient incentives for judges to be retained, the voter would place positive probability on the judge being harsh or moderate given a sentence of  $s_2$ , and probability one on the judge being harsh given a sentence of  $s_3$ ; in both cases, the lenient voter would prefer to replace the incumbent. The minimum pandering equilibrium is therefore the pooling equilibrium, in which all judges impose a sentence of  $s_1$  irrespective of circumstances. The voter's posterior distribution over judges is the same as the prior. The voter is indifferent and can therefore commit to retaining the judge with certainty given an observed sentence of  $s_1$ . Out of equilibrium beliefs given  $s_2$  or  $s_3$  correspond to those in the no-pandering case. ■

### The $\hat{S} = \{s_1, s_2\}$ subgame

Moderate and lenient judges, if retained, will implement their most preferred sentence conditional on culpability, so  $E[u_j|R = 1, t_j = L, \hat{S} = \{s_1, s_2\}] = E[u_j|R = 1, t_j = M, \hat{S} = \{s_1, s_2\}] = \delta_j b$ . Harsh judges will do so unless  $k = k_4$ , so  $E[u_j|R = 1, t_j = H, \hat{S} = \{s_1, s_2\}] = \delta_j (b - \frac{a}{4})$ . Further,

$$\begin{aligned}
E[u_j|R = 0, t_j = L, \hat{S} = \{s_1, s_2\}] &= -\delta_j \frac{a(2 - \pi)}{4} \\
E[u_j|R = 0, t_j = M, \hat{S} = \{s_1, s_2\}] &= -\delta_j \frac{3\pi a}{4} \\
E[u_j|R = 0, t_j = H, \hat{S} = \{s_1, s_2\}] &= -\delta_j \frac{a(2 + \pi)}{4}.
\end{aligned}$$

**Lemma 3 (Relative incentives to pander given  $\hat{S} = \{s_1, s_2\}$ )** *Suppose  $\hat{S} = \{s_1, s_2\}$ . Then lenient judges have the strongest incentives to pander, followed by harsh judges, followed by moderate judges.*

**Proof.** The net expected benefit of being retained is  $\delta_j(b + \frac{a(2-\pi)}{4})$  for lenient judges,  $\delta_j(b + \frac{a(1+\pi)}{4})$  for harsh judges, and  $\delta_j(b + \frac{3\pi a}{4})$  for moderates. The ranking holds if  $2 - \pi > 1 + \pi > 3\pi$ , which it does for  $\pi \in (0, \frac{1}{2})$ . ■

Note that in the  $\{s_1, s_2\}$  case, no judge will ever have to pander more than one space from their constrained optimal sentence. Further, no judge will have an incentive to pander one sentence if  $b < \frac{a(4-\delta_j(2-\pi))}{4\delta_j}$ . All judges will be willing to pander one space if  $b > \frac{(4-3\pi\delta_j)a}{4\delta_j}$ .

**Proposition 4 (Ex post review without pandering for  $\hat{S} = \{s_1, s_2\}$ )** *Suppose  $\hat{S} = \{s_1, s_2\}$  and  $b < \frac{a(4-\delta_j(2-\pi))}{4\delta_j}$ . The following strategy profile and system of beliefs constitute a unique sequential equilibrium: (a) judges in both periods assign sentences per the fourth column of Table 1. (b) harsh voters retain incumbents if  $s = s_2$  and otherwise discard; moderate voters retain incumbents if  $s = s_2$  and otherwise discard; lenient voters retain incumbents if  $s = s_1$  and otherwise discard. Additionally, voters' posterior beliefs over judge types are derived by Bayes' Rule, and characterized as follows:*

	$\hat{\pi}_L$	$\hat{\pi}_M$	$\hat{\pi}_H$
$s_1$	$\frac{4\pi}{2+\pi}$	$\frac{2-4\pi}{2+\pi}$	$\frac{\pi}{2+\pi}$
$s_2$	0	$\frac{2-4\pi}{2-\pi}$	$\frac{3\pi}{2-\pi}$

**Proof.** In the absence of pandering, in the first period lenient and moderate judges will impose their most preferred sentence given  $k$ , while harsh judges will impose their most preferred sentence given their inability to impose  $s_3$  for  $k = k_4$ . This produces the posterior distribution of judges given in the table. Given posterior beliefs, the expected utilities to the voter of retaining or replacing given an observed sentence are given as follows:

**Harsh voter:**

$$\begin{aligned}
E[u_v(R = 0|t_v = H, \hat{S} = \{s_1, s_2\})] &= -\delta_v \frac{a(2 + \pi)}{4} \\
E[u_v(R = 1|t_v = H, \hat{S} = \{s_1, s_2\}, s = s_1)] &= -\delta_v \frac{a(4 + 9\pi)}{4(2 + \pi)} \\
E[u_v(R = 1|t_v = H, \hat{S} = \{s_1, s_2\}, s = s_2)] &= -\delta_v \frac{a(4 - 5\pi)}{4(2 - \pi)}
\end{aligned}$$

**Moderate voter:**

$$\begin{aligned}
E[u_v(R = 0|t_v = M, \hat{S} = \{s_1, s_2\})] &= -\delta_v \frac{3a\pi}{4} \\
E[u_v(R = 1|t_v = M, \hat{S} = \{s_1, s_2\}, s = s_1)] &= -\delta_v \frac{9a\pi}{4(2+\pi)} \\
E[u_v(R = 1|t_v = M, \hat{S} = \{s_1, s_2\}, s = s_2)] &= -\delta_v \frac{3a\pi}{4(2-\pi)}
\end{aligned}$$

**Lenient voter:**

$$\begin{aligned}
E[u_v(R = 0|t_v = L, \hat{S} = \{s_1, s_2\})] &= -\delta_v \frac{a(2-\pi)}{4} \\
E[u_v(R = 1|t_v = L, \hat{S} = \{s_1, s_2\}, s = s_1)] &= -\delta_v \frac{a(4-5\pi)}{4(2+\pi)} \\
E[u_v(R = 1|t_v = L, \hat{S} = \{s_1, s_2\}, s = s_2)] &= -\delta_v \frac{a(4+\pi)}{4(2-\pi)}
\end{aligned}$$

The induced preferences for the actions listed in the proposition are immediately apparent by comparison of the relevant quantities. ■

**Proposition 5 (Ex post review with pandering for  $\hat{S} = \{s_1, s_2\}$ )** Suppose  $\hat{S} = \{s_1, s_2\}$  and  $b > \frac{(4-3\pi\delta_j)a}{4\delta_j}$ . The following strategy profile and system of beliefs constitute a sequential equilibrium:

• If  $t_v = H$

$$\begin{aligned}
- \sigma_L^{s_1}(k) &= \frac{3-3\pi}{4(2-\pi)} \forall k; \sigma_L^{s_2}(k) = \frac{5-\pi}{4(2-\pi)} \forall k; \\
- \sigma_M^{s_1}(k) &= 1 \text{ for } k \in \{k_1, k_2\}; \sigma_M^{s_2}(k) = 1 \text{ for } k \in \{k_3, k_4\}; \\
- \sigma_H^{s_1}(k_1) &= 1; \sigma_H^{s_2}(k) = 1 \text{ for } k \in \{k_2, k_3, k_4\}; \\
- \rho(s_1) &= \frac{\delta_j(4b+a(2-\pi))-4a}{\delta_j(4b+a(2-\pi))}; \rho(s_2) = 1;
\end{aligned}$$

• If  $t_v = M$

$$\begin{aligned}
- \sigma_L^{s_1}(k) &= \frac{5-9\pi}{4(2-3\pi)} \forall k; \sigma_L^{s_2}(k) = \frac{3(1-\pi)}{4(2-3\pi)} \forall k; \\
- \sigma_M^{s_1}(k) &= 1 \text{ for } k \in \{k_1, k_2\}; \sigma_M^{s_2}(k) = 1 \text{ for } k \in \{k_3, k_4\}; \\
- \sigma_H^{s_1}(k_1) &= 1; \sigma_H^{s_2}(k) = 1 \text{ for } k \in \{k_2, k_3, k_4\}; \\
- \rho(s_1) &= \frac{\delta_j(4b+a(2-\pi))-4a}{\delta_j(4b+a(2-\pi))}; \rho(s_2) = 1;
\end{aligned}$$

• If  $t_v = L$

$$\begin{aligned}
- \sigma_L^{s_1}(k) &= 1 \forall k; \\
- \sigma_M^{s_1}(k) &= 1 \forall k; \\
- \sigma_H^{s_1}(k) &= 1 \forall k; \\
- \rho(s_1) &= 1; \rho(s_2) = 0;
\end{aligned}$$

• All judges assign sentences in the second period per the fourth column of Table 1;

- Additionally, equilibrium beliefs are formed via Bayes' rule, and out-of-equilibrium beliefs by the minimum pandering criterion, as follows:

$t_v = H$			$t_v = M$			$t_v = L$				
	$\hat{\pi}_L$	$\hat{\pi}_M$	$\hat{\pi}_L$	$\hat{\pi}_M$	$\hat{\pi}_H$		$\hat{\pi}_L$	$\hat{\pi}_M$	$\hat{\pi}_H$	
$s_1$	$\frac{3(1-\pi)\pi}{4-5\pi}$	$\frac{4-10\pi+4\pi^2}{4-5\pi}$	$\frac{(2-\pi)\pi}{4-5\pi}$	$\frac{\pi(5-9\pi)}{4-7\pi}$	$\frac{4-14\pi+12\pi^2}{4-7\pi}$	$\frac{\pi(2-3\pi)}{4-7\pi}$	$s_1$	$\pi$	$(1-2\pi)$	$\pi$
$s_2$	$\frac{(5-\pi)\pi}{4+\pi}$	$\frac{2(2-\pi)(1-2\pi)}{4+\pi}$	$\frac{3(2-\pi)\pi}{4+\pi}$	$\frac{3(1-\pi)\pi}{4-5\pi}$	$\frac{4-14\pi+12\pi^2}{4-5\pi}$	$\frac{3\pi(2-3\pi)}{4-5\pi}$	$s_2$	$0^\dagger$	$\frac{2-4\pi}{2-\pi}^\dagger$	$\frac{3\pi}{2-\pi}^\dagger$

† denotes minimum pandering out-of-equilibrium beliefs

**Proof. Harsh voter.** From Lemma 3, the most lenient judge has the strongest incentive to pander. In the minimum pandering equilibrium, (a) voter strategy will make the lenient judge indifferent between pandering one step and not pandering. Likewise, (b) the lenient voter's strategy will make the judge indifferent between retaining and not retaining given observed sentences. The indifference condition corresponding to (a) is

$$\rho(s_1)\delta_j b - (1 - \rho(s_1))\frac{\delta_j a(2 - \pi)}{4} = \rho(s_2)\delta_j b - (1 - \rho(s_2))\frac{\delta_j a(2 - \pi)}{4} - a \quad (8)$$

or

$$\rho(s_1) = \frac{\rho(s_2)\delta_j(4b + a(2 - \pi)) - a}{\delta_j(4b + a(2 - \pi))}. \quad (9)$$

For  $\rho(s_1) \geq 0$ , it must be the case that

$$b \geq \frac{4a - \rho(s_2)(2 - \pi)\delta_j a}{4\delta_j}. \quad (10)$$

Given the strong incentives to pander, this holds irrespective of the value of  $\pi$  if  $\rho(s_2) = 1$ . Substituting into (9) gives the expression in the proposition.

Posterior probabilities for judge types are given by (7). The voter is indifferent between retaining and replacing if

$$\frac{a(2 + \pi)}{4} = \frac{a\pi \sum_k \sigma_L^{s_z}(k) + \frac{a}{2}(1 - 2\pi) \sum_k \sigma_M^{s_z}(k) + \frac{a}{4}\pi \sum_k \sigma_H^{s_z}(k)}{\pi \sum_k \sigma_L^{s_z}(k) + (1 - 2\pi) \sum_k \sigma_M^{s_z}(k) + \pi \sum_k \sigma_H^{s_z}(k)} \quad \text{for } z = 1, 2,$$

which simplifies to  $(1 - 2\pi) \sum_k \sigma_M^{s_z}(k) + (1 + \pi) \sum_k \sigma_H^{s_z}(k) = (2 - \pi) \sum_k \sigma_L^{s_z}(k)$ . The judge strategies given in the proposition satisfy minimum pandering, symmetry across culpability levels, and  $\sigma_{t_j}^{s_z}(k) \in [0, 1] \forall t_j, s_z, k$ . Substituting the judges' equilibrium strategies into (7) and the analogous expressions for moderate and harsh judges give the beliefs denoted in the table.

**Moderate voter.** The judge's indifference condition is given by (8), and yields the same values for  $\rho(s_1)$  and  $\rho(s_2)$  as above. The voter's indifference condition is

$$\frac{3\pi a}{4} = \frac{\frac{a}{2}\pi \sum_k \sigma_L^{s_z}(k) + \frac{a}{4}\pi \sum_k \sigma_H^{s_z}(k)}{\pi \sum_k \sigma_L^{s_z}(k) + (1 - 2\pi) \sum_k \sigma_M^{s_z}(k) + \pi \sum_k \sigma_H^{s_z}(k)} \quad \text{for } z = 1, 2,$$

which simplifies to  $(3 - 6\pi) \sum_k \sigma_M^{s_z}(k) + (3\pi - 1) \sum_k \sigma_H^{s_z}(k) = (2 - 3\pi) \sum_k \sigma_L^{s_z}(k)$ . Judicial strategies in the proposition satisfy this condition and yield beliefs given in the table. ■

**Lenient voter.** The minimum pandering equilibrium is a pooling equilibrium, in which all judges impose a sentence of  $s_1$  irrespective of circumstances. The voter's posterior distribution over judges is the same as the prior. Indifference therefore permits the voter to commit to retaining the judge with certainty given an observed sentence of  $s_1$ . Out of equilibrium beliefs given  $s_2$  correspond to those in the no-pandering case.

### The $\hat{S} = \{s_2, s_3\}$ subgame

Lenient and moderate judges, if retained, will implement  $s_2$  irrespective of culpability, so  $E[u_j|R = 1, t_j = L, \hat{S} = \{s_2, s_3\}] = \delta_j(b - a)$ , and  $E[u_j|R = 1, t_j = M, \hat{S} = \{s_2, s_3\}] = \delta_j(b - \frac{a}{2})$ . Harsh judges will only be constrained if  $k = 0, t_j = L, \hat{S} = \{s_2, s_3\}$ ,  $E[u_j|R = 1, t_j = H, \hat{S} = \{s_2, s_3\}] = \delta_j(b - \frac{a}{4})$ . Further,

$$\begin{aligned} E[u_j|R = 0, t_j = M, \hat{S} = \{s_2, s_3\}] &= -\delta_j \frac{a(2 + \pi)}{4} \\ E[u_j|R = 0, t_j = H, \hat{S} = \{s_2, s_3\}] &= -\delta_j \frac{a(2 - \pi)}{4}. \end{aligned}$$

**Lemma 4 (Relative incentives to pander given  $\hat{S} = \{s_2, s_3\}$ )** *Suppose  $\hat{S} = \{s_2, s_3\}$ . Then harsh judges have the strongest incentives to pander. Moderate and lenient judges have the same incentive to pander.*

**Proof.** The net expected benefit of being retained is  $\delta_j(b + \frac{a(1-\pi)}{4})$  for harsh judges, and  $\delta_j(b + \frac{\pi a}{4})$  for moderate and lenient judges. The first quantity is greater than the second because  $\pi < \frac{1}{2}$  by assumption. ■

No judge will have an incentive to pander if  $b < \frac{a(4-\delta_j(1-\pi))}{4\delta_j}$ . All judges will be willing to pander once space if  $b > \frac{a(4-\delta_j\pi)}{4\delta_j}$ .

**Proposition 6 (Ex post review without pandering for  $\hat{S} = \{s_2, s_3\}$ )** *Suppose  $\hat{S} = \{s_2, s_3\}$  and  $b < \frac{a(4-\delta_j(1-\pi))}{4\delta_j}$ . The following voter profiles and system of beliefs constitute a sequential equilibrium: (a) judges in both periods assign sentences per the fifth column of Table 1; (b) harsh voters retain incumbents if  $s = s_3$  and otherwise discard; and moderate and lenient voters retain incumbents if  $s = s_2$  and otherwise discard. Additionally, voters' posterior beliefs over judge types are derived via Bayes' Rule, and characterized as follows:*

	$\hat{\pi}_L$	$\hat{\pi}_M$	$\hat{\pi}_H$
$s_2$	$\frac{4\pi}{4-\pi}$	$\frac{4-8\pi}{4-\pi}$	$\frac{3\pi}{4-\pi}$
$s_3$	0	0	1

**Proof.** In the absence of adequate pandering incentives, judges assign their most preferred sentences subject to the constraint of the discretionary set. This produces the posterior distribution of judges given in the table. The expected utilities for retaining or replacing an incumbent are:

**Harsh voter:**

$$\begin{aligned} E[u_v(R = 0|t_v = H, \hat{S} = \{s_2, s_3\})] &= -\delta_v \frac{a(2 - \pi)}{4} \\ E[u_v(R = 1|t_v = H, \hat{S} = \{s_2, s_3\}, s = s_2)] &= -\delta_v \frac{a(8 - 5\pi)}{4(4 - \pi)} \\ E[u_v(R = 1|t_v = H, \hat{S} = \{s_2, s_3\}, s = s_3)] &= -\delta_v \frac{a}{4} \end{aligned}$$

**Moderate voter:**

$$\begin{aligned}
E[u_v(R = 0|t_v = M, \hat{S} = \{s_2, s_3\})] &= -\delta_v \frac{a(2 + \pi)}{4} \\
E[u_v(R = 1|t_v = M, \hat{S} = \{s_2, s_3\}, s = s_2)] &= -\delta_v \frac{a(8 + \pi)}{4(4 - \pi)} \\
E[u_v(R = 1|t_v = M, \hat{S} = \{s_2, s_3\}, s = s_3)] &= -\delta_v \frac{3a}{4}
\end{aligned}$$

### Lenient voter

$$\begin{aligned}
E[u_v(R = 0|t_v = L, \hat{S} = \{s_2, s_3\})] &= -\delta_v \frac{a(4 + \pi)}{4} \\
E[u_v(R = 1|t_v = L, \hat{S} = \{s_2, s_3\}, s = s_1)] &= -\delta_v \frac{a(16 - \pi)}{4(4 - \pi)} \\
E[u_v(R = 1|t_v = L, \hat{S} = \{s_2, s_3\}, s = s_2)] &= -\delta_v \frac{5a}{4}
\end{aligned}$$

The induced preferences for the actions listed in the proposition are immediately apparent by comparison of the relevant quantities. ■

**Proposition 7 (Ex post review with pandering for  $\hat{S} = \{s_2, s_3\}$ )** *Suppose  $\hat{S} = \{s_2, s_3\}$  and  $b > \frac{a(4 - \delta_j \pi)}{4\delta_j}$ . The following strategy profile and system of beliefs constitute a sequential equilibrium:*

- If  $t_v = H$ 
  - $\sigma_L^{s_3}(k) = 1 \forall k$ ;
  - $\sigma_M^{s_3}(k) = 1 \forall k$ ;
  - $\sigma_H^{s_3}(k) = 1 \forall k$ ;
  - $\rho(s_2) = 0$ ;  $\rho(s_3) = 1$ ;
- If  $t_v = M$  or  $t_v = L$ 
  - $\sigma_L^{s_2}(k) = 1 \forall k$ ;
  - $\sigma_M^{s_2}(k) = 1 \forall k$ ;
  - $\sigma_H^{s_2}(k) = 1 \forall k$ ;
  - $\rho(s_2) = 1$ ;  $\rho(s_3) = 0$ ;
- All judges assign sentences in the second period per the fifth column of Table 1;
- Additionally, equilibrium beliefs are formed via Bayes' rule, and out-of-equilibrium beliefs by the minimum pandering criterion, as follows:

	$t_v = H$			$t_v = M$ or $t_v = L$		
	$\hat{\pi}_L$	$\hat{\pi}_M$	$\hat{\pi}_H$	$\hat{\pi}_L$	$\hat{\pi}_M$	$\hat{\pi}_H$
$s_2$	$\frac{4\pi}{4-\pi} \dagger$	$\frac{4(1-2\pi)}{4-\pi} \dagger$	$\frac{3\pi}{4-\pi} \dagger$	$\pi$	$(1 - 2\pi)$	$\pi$
$s_3$	$\pi$	$(1 - 2\pi)$	$\pi$	$0 \dagger$	$\frac{2-4\pi}{2-\pi} \dagger$	$\frac{3\pi}{2-\pi} \dagger$

† denotes minimum pandering out-of-equilibrium beliefs

**Proof.** Unlike in the previous cases, there is no minimum-pandering equilibria in which any voter is indifferent at both allowed sentences. Consequently, only fully pooling equilibria are feasible, and the selected equilibria satisfy the minimum-pandering constraint on out-of-equilibrium beliefs.

■