On-line Appendix for "Judicial Review as a Response to Political Posturing"

Justin Fox^{*} Matthew C. Stephenson[†]

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Abstract

Section A provides some preliminary analysis. Section B proves the formal propositions in "Judicial Review as a Response to Political Posturing." Section C explores several items relating to the robustness of our analysis: We show that judicial review can reduce the Voter's policy welfare even when we relax the constraint imposed (in the main text) on the accuracy of the Judge's signal of the state. We also show that our main results go through when the normal action is justiciable and that there always exists an equilibrium in which the high-ability Leader matches policy to the state. Section D considers how equilibrium behavior and voter welfare change as one varies the electoral ambition of the Leader.

^{*}Assistant Professor, Department of Political Science, Yale University, ISPS, P.O. Box 208209, New Haven, CT 06520. Email: justin.fox@yale.edu

[†]Professor of Law, Harvard Law School, Griswold 509, Cambridge, MA 02138. Email: mstephen@law.harvard.edu

A Preliminaries

We begin by reiterating two of the assumptions made in the main text. First, we assumed that the high-ability Leader matches policy to the state. Second, we assumed that policy a = n is not justiciable, which is equivalent to assuming that the Judge always upholds the Leader when a = nis proposed. With the sole exception of Section C, both assumptions are maintained throughout the appendix.

A.1 The Voter's Beliefs About the Leader's Ability

Denote the low-ability Leader's strategy as π and the Judge's strategy as (σ_n, σ_x) . π is the probability with which the low-ability Leader proposes a = x, σ_n is the probability with which the Judge upholds a = x when her signal of the state s = n, and σ_x is the probability with which the Judge upholds a = x when s = x.

Absent review, the Leader's reputation from action a will be denoted by $\hat{q}(a;\pi)$. That is, $\hat{q}(a;\pi)$ denotes the Voter's posterior that the Leader is of high ability when policy a is proposed. By Bayes' Rule, we have

$$\hat{q}(a;\pi) = \frac{Pr(a|t=h)Pr(t=h)}{Pr(a|t=h)Pr(t=h) + Pr(a|t=l)Pr(t=l)}.$$

Thus,

$$\hat{q}(x;\pi) \equiv \frac{(1-p)q}{(1-p)q+\pi(1-q)}$$

 $\hat{q}(n;\pi) \equiv \frac{pq}{pq+(1-\pi)(1-q)}$

With judicial review, the Leader's reputation when he proposes policy a and the Judge issues ruling $d \in \{uphold, strike\}$ will be denoted by $\hat{q}(a, d; \pi, \sigma)$. As we assume that only a = x is justiciable, we fix d = uphold when a = n and set $\hat{q}(n, uphold; \pi, \sigma) = \hat{q}(n; \pi)$. All that remains is to specify \hat{q} when a = x and this proposal is subject to review. If the Judge issues ruling d with positive probability when a = x, then, by Bayes' Rule, we have

$$\hat{q}(x,d;\pi,\sigma) = \frac{Pr(d|x,t=h)\hat{q}(x;\pi)}{Pr(d|x,t=h)\hat{q}(x;\pi) + Pr(d|x,t=l)(1-\hat{q}(x;\pi))}.$$
(A1)

Write $\lambda(t, \sigma)$ for the probability proposal a = x is upheld when the Leader's type is t and the

Judge uses strategy σ : $\lambda(t, \sigma) = Pr(uphold|x, t)$, where $Pr(uphold|x, t) = \sum_{\omega} Pr(\omega|x, t)[\sigma_x Pr(s = x|\omega) + \sigma_n Pr(s = n|\omega)]$. We thus have

$$\lambda(h,\sigma) \equiv \sigma_x \gamma + \sigma_n (1-\gamma)$$

$$\lambda(l,\sigma) \equiv \sigma_x [(1-p)\gamma + p(1-\gamma)] + \sigma_n [(1-p)(1-\gamma) + p\gamma].$$

Using the convention that $\hat{q}(x, d; \pi, \sigma) = q$ when ruling d is off path, and substituting both $\hat{q}(x; \pi)$ and $\lambda(t, \sigma)$ into (A1) when ruling d is on path, we have that

$$\hat{q}(x, uphold; \pi, \sigma) \equiv \begin{cases} \frac{\lambda(h, \sigma)(1-p)q}{\lambda(h, \sigma)(1-p)q + \lambda(l, \sigma)\pi(1-q)}, & \text{if } \sigma_n > 0 \text{ or } \sigma_x > 0\\ q, & \text{otherwise} \end{cases}$$

and

$$\hat{q}(x, strike; \pi, \sigma) \equiv \begin{cases} \frac{[1-\lambda(h,\sigma)](1-p)q}{[1-\lambda(h,\sigma)](1-p)q+[1-\lambda(l,\sigma)]\pi(1-q)}, & \text{if } \sigma_n < 1 \text{ or } \sigma_x < 1 \\ q, & \text{otherwise} \end{cases}$$

A.2 The Leader's Expected Payoff

Write $u(a, d; \omega)$ for the (common) policy payoff that results when action a is proposed, the Judge's ruling is d, and the state is ω , where

$$u(a,d;\omega) = \begin{cases} 1, & \text{if } \{a = \omega; d = uphold\} \text{ or } \{a \neq \omega; d = strike\} \\ 0, & \text{otherwise} \end{cases}$$

In what follows, we focus on the low-ability Leader's incentives (since we have assumed the highability Leader matches policy to the state). The low-ability Leader's incentive to propose a particular policy depends upon his expected policy and electoral payoffs from doing so.

Write $E_{\omega,d}[u(a,d;\omega);\sigma]$ for the expected policy payoff to the low-ability Leader from proposing policy *a* when the Judge's strategy is σ . Now notice that

$$E_{\omega,d}[u(a,d;\omega);\sigma] = \sum_{\omega,d} Pr(d|a,\omega)Pr(\omega)u(a,d;\omega).$$

Thus, we have that $E_{\omega,d}[u(x,d;\omega);\sigma] = p \cdot [(1-\sigma_n)\gamma + (1-\sigma_x)(1-\gamma)] + (1-p) \cdot [\sigma_n(1-\gamma) + \sigma_x\gamma]$; and, since the Judge is assumed to always uphold the Leader when a = n, it follows that

$E_{\omega,d}[u(n,d;\omega);\sigma] = p.$

Write $E_d[F(\hat{q}(a, d; \pi, \sigma))]$ for the low-ability Leader's expected probability of reelection when he proposes policy a, his strategy is π , the Judge's strategy is σ , and beliefs about the Leader's ability are derived via Bayes' Rule whenever possible. Since

$$\begin{split} E_d[F(\hat{q}(a,d;\pi,\sigma))] &= Pr(uphold|a,t=l)F(\hat{q}(a,uphold;\pi,\sigma)) + \\ & Pr(strike|a,t=l)F(\hat{q}(a,strike;\pi,\sigma)), \end{split}$$

we have that $E_d[F(\hat{q}(x,d;\pi,\sigma))] = \lambda(l,\sigma)F(\hat{q}(x,uphold;\pi,\sigma)) + (1 - \lambda(l,\sigma))F(\hat{q}(x,strike;\pi,\sigma));$ and, since the Judge is assumed to always uphold the Leader when a = n, it follows that $E_d[F(\hat{q}(n,d;\pi,\sigma))] = F(\hat{q}(n;\pi)).$

We will write $\Delta^p(\sigma) \equiv E_{\omega,d}[u(x,d;\omega);\sigma] - p$ for the low-ability Leader's net policy payoff from choosing a = x when the Judge's strategy is σ , and we will write $\Delta^e(\pi,\sigma) \equiv E_d[F(\hat{q}(x,d;\pi,\sigma))] - F(\hat{q}(n;\pi))$ for the low-ability Leader's net electoral payoff from choosing a = x given his strategy is π , the Judge's strategy is σ , and beliefs about the Leader's ability are derived via Bayes' Rule whenever possible. Finally, we denote by $\Delta(\pi,\sigma) \equiv \alpha \Delta^p(\sigma) + (1-\alpha)\Delta^e(\pi,\sigma)$ the net benefit to the low-ability Leader from choosing a = x. (Recall that α is the weight that the Leader attaches to policy considerations.) If this net benefit is positive, then the low-ability Leader maximizes his expected payoff by choosing a = x; if it is equal to zero, he is indifferent between a = x and a = n; and if it is negative, he maximizes his expected payoff by selecting a = n.

A.3 The Judge's Beliefs about the State and Expected Payoff

Write $\hat{p}(s;\pi)$ for the probability the Judge assigns to $\omega = n$ when a = x, her signal is s, and the strategy of the low-ability Leader is π . By Bayes' Rule, we have

$$\hat{p}(s;\pi) = \frac{Pr(s|\omega=n)Pr(a=x|\omega=n)Pr(\omega=n)}{Pr(s|\omega=n)Pr(a=x|\omega=n)Pr(\omega=n) + Pr(s|\omega=x)Pr(a=x|\omega=x)Pr(\omega=x)}$$

Thus,

$$\hat{p}(x;\pi) \equiv \frac{(1-\gamma)(1-q)\pi p}{(1-\gamma)(1-q)\pi p + \gamma(q+(1-q)\pi)(1-p)} \\
\hat{p}(n;\pi) \equiv \frac{\gamma(1-q)\pi p}{\gamma(1-q)\pi p + (1-\gamma)(q+(1-q)\pi)(1-p)}.$$

Write $E_{\omega}[u(x,d;\omega);s,\pi]$ for the Judge's expected policy payoff from decision d when a = x, her signal is s, and the strategy of the low-ability Leader is π . Since $E_{\omega}[u(x,d;\omega);s,\pi] = \hat{p}(s;\pi)u(x,d;\omega=n) + (1-\hat{p}(s;\pi))u(x,d;\omega=x)$, by the definition of $u(a,d;\omega)$, we have $E_{\omega}[u(x,strike;\omega);s,\pi] = \hat{p}(s;\pi)$ and $E_{\omega}[u(x,uphold;\omega);s,\pi] = 1 - \hat{p}(s;\pi)$.

A.4 The Voter's Policy Payoff

Write $E_{a,d,\omega}[u(a,d;\omega);(\pi,\sigma),t]$ for the Voter's expected current policy payoff when the Leader's ability level is t and strategy profile (π,σ) is played. Since $E_{a,d,\omega}[u(a,d;\omega);(\pi,\sigma),t] =$ $\sum_{a,d,\omega} Pr(d|a,\omega)Pr(a|t,\omega)Pr(\omega)u(a,d;\omega)$, we have that

$$E_{a,d,\omega}[u(a,d;\omega);(\pi,\sigma),h] = p + (1-p)(\sigma_x\gamma + \sigma_n(1-\gamma))$$

and

$$E_{a,d,\omega}[u(a,d;\omega);(\pi,\sigma),l] = p((1-\pi) + \pi((1-\sigma_x)(1-\gamma) + (1-\sigma_n)\gamma)) + (1-p)(\pi(\sigma_x\gamma + \sigma_n(1-\gamma))).$$

In what follows, we denote the Voter's expected current policy payoff from strategy profile (π, σ) as $V(\pi, \sigma)$:

$$V(\pi,\sigma) \equiv qE_{a,d,\omega}[u(a,d;\omega);(\pi,\sigma),h] + (1-q)E_{a,d,\omega}[u(a,d;\omega);(\pi,\sigma),l].$$

B Proofs

We begin by proving three lemmas that will be invoked in proving the main text's results concerning equilibrium behavior with and without judicial review.

Lemma 1 (a) Suppose the Judge employs a passive strategy ($\sigma_n = \sigma_x = 1$). Then the lowability's Leader's net electoral payoff from the extraordinary action is positive (negative) if and only if the probability with which he proposes the extraordinary action is less (greater) than 1 - p: $\Delta^e(\pi, (1, 1)) \stackrel{\geq}{\equiv} 0$ if and only if $\pi \stackrel{\leq}{\equiv} 1 - p$. (b) If the probability with which the Judge upholds the extraordinary action is positive, then the low-ability Leader's net policy payoff from the extraordinary action is negative; in contrast, when the Judge always strikes down the extraordinary action, the low-ability Leader is indifferent policy-wise between a = n and a = x: If $\sigma_n > 0$ or $\sigma_x > 0$, then $\Delta^p(\sigma_n, \sigma_x) < 0$; also, $\Delta^p(0, 0) = 0$.

 $\frac{\text{Proof of part (a)}}{\hat{f}(\hat{q}(x;\pi))} \stackrel{\text{Proof of part (a)}}{=} \Delta^{e}(\pi,(1,1)) = F(\hat{q}(x;\pi)) - F(\hat{q}(n;\pi)). \text{ Thus, } \Delta^{e}(\pi,(1,1)) \stackrel{\text{Proof of part (a)}}{=} 0 \text{ if and only if } F(\hat{q}(x;\pi)) \stackrel{\text{Proof of part (a)}}{=} F(\hat{q}(n;\pi)). \text{ Since } F \text{ is increasing in } \hat{q}, \ F(\hat{q}(x;\pi)) \stackrel{\text{Proof of part (b)}}{=} F(\hat{q}(n;\pi)). \text{ Finally, one can show (via algebra) that } \hat{q}(x;\pi) \stackrel{\text{Proof of part (b)}}{=} \hat{q}(n;\pi). \text{ Finally, one can show (via algebra) that } \hat{q}(x;\pi) \stackrel{\text{Proof of part (b)}}{=} \hat{q}(n;\pi). \text{ Finally, one can show (via algebra) that } \hat{q}(x;\pi) \stackrel{\text{Proof of part (b)}}{=} \hat{q}(n;\pi). \text{ Finally, one can show (via algebra) that } \hat{q}(x;\pi) \stackrel{\text{Proof of part (b)}}{=} \hat{q}(n;\pi). \text{ Finally, one can show (via algebra) that } \hat{q}(x;\pi) \stackrel{\text{Proof of part (b)}}{=} \hat{q}(n;\pi). \text{ Finally, one can show (via algebra) that } \hat{q}(x;\pi) \stackrel{\text{Proof of part (b)}}{=} \hat{q}(n;\pi). \text{ Finally, one can show (via algebra) that } \hat{q}(x;\pi) \stackrel{\text{Proof of part (b)}}{=} \hat{q}(n;\pi). \text{ Finally, one can show (via algebra) that } \hat{q}(x;\pi) \stackrel{\text{Proof of part (b)}}{=} \hat{q}(n;\pi). \text{ Finally, one can show (via algebra) that } \hat{q}(x;\pi) \stackrel{\text{Proof of part (b)}}{=} \hat{q}(n;\pi). \text{ Finally, one can show (via algebra) that } \hat{q}(x;\pi) \stackrel{\text{Proof of part (b)}}{=} \hat{q}(n;\pi). \text{ Finally, one can show (via algebra) that } \hat{q}(x;\pi) \stackrel{\text{Proof of part (b)}}{=} \hat{q}(n;\pi). \text{ Finally, one can show (via algebra) that } \hat{q}(x;\pi) \stackrel{\text{Proof of part (b)}}{=} \hat{q}(n;\pi). \text{ Finally, one can show (via algebra) that } \hat{q}(x;\pi) \stackrel{\text{Proof of part (b)}}{=} \hat{q}(n;\pi). \text{ Finally, one can show (via algebra) that } \hat{q}(x;\pi) \stackrel{\text{Proof of part (b)}}{=} \hat{q}(n;\pi). \text{ Finally, one can show (via algebra) that } \hat{q}(x;\pi) \stackrel{\text{Proof of part (b)}}{=} \hat{q}(n;\pi). \text{ Finally, one can show (via algebra) that } \hat{q}(x;\pi) \stackrel{\text{Proof of part (b)}}{=} \hat{q}(n;\pi). \text{ Finally, one can show (via algebra) that } \hat{q}(x;\pi) \stackrel{\text{Proof of part (b)}}{=} \hat{q}(n;\pi). \text{ Finally, one can show (via algebra) that } \hat{q}(x;\pi) \stackrel{\text{Proof of part (b)}}{=} \hat{q}(n;\pi). \text{ Finally,$

$$E_{\omega,d}[u(x,d;\omega);\sigma] = p \cdot \left[(1-\sigma_n)\gamma + (1-\sigma_x)(1-\gamma)\right] + (1-p) \cdot \left[\sigma_n(1-\gamma) + \sigma_x\gamma\right]$$

First, notice that $E_{\omega,d}[u(x,d;\omega);\sigma] = p$ when $\sigma_n = \sigma_x = 0$; therefore, $\Delta^p(0,0) = 0$.

Since $\Delta^p(0,0) = 0$, to show that $\Delta^p(\sigma_n, \sigma_x) < 0$ whenever $\sigma_n > 0$ or $\sigma_x > 0$, it is sufficient to show that $\Delta^p(\sigma_n, \sigma_x)$ is decreasing in both σ_n and σ_x . Notice that $\frac{\partial \Delta^p(\sigma_n, \sigma_x)}{\partial \sigma_n} = 1 - p - \gamma$ and that $\frac{\partial \Delta^p(\sigma_n, \sigma_x)}{\partial \sigma_x} = -p + \gamma$. By assumption, $\gamma > \frac{1}{2}$ and $p > \frac{1}{2}$. Thus, $\frac{\partial \Delta^p(\sigma_n, \sigma_x)}{\partial \sigma_n} < 0$. Also, by assumption, $p > \gamma$. Thus, $\frac{\partial \Delta^p(\sigma_n, \sigma_x)}{\partial \sigma_x} < 0$.

Lemma 2 (a) The low-ability Leader's net expected payoff from the extraordinary action, $\Delta(\pi, \sigma)$, is decreasing in π , where $\Delta(1, \sigma) < 0$. (b) When $\Delta(0, \sigma) > 0$, there exists a unique solution to $\Delta(\pi, \sigma) = 0$ in π , say $\hat{\pi}$, where $\hat{\pi} \in (0, 1)$.

Proof of part (a). We first show that $\Delta(\pi, \sigma)$ is decreasing in π . Taking the derivative of the

low-ability Leader's net benefit from the extraordinary action with respect to π , we have

$$\begin{split} \frac{\partial \Delta(\pi,\sigma)}{\partial \pi} &= (1-\alpha) \cdot \left(\lambda(l,\sigma) \frac{\partial F(\hat{q}(x,uphold;\pi,\sigma))}{\partial \hat{q}} \frac{\partial \hat{q}(x,uphold;\pi,\sigma)}{\partial \pi} + \right. \\ & \left. (1-\lambda(l,\sigma)) \frac{\partial F(\hat{q}(x,strike;\pi,\sigma))}{\partial \hat{q}} \frac{\partial \hat{q}(x,strike;\pi,\sigma)}{\partial \pi} - \frac{\partial F(\hat{q}(n;\pi))}{\partial \hat{q}} \frac{\partial \hat{q}(n;\pi)}{\partial \pi} \right) \end{split}$$

By assumption, the electoral strength function F is increasing in \hat{q} ; by inspection, $\hat{q}(x, d; \pi, \sigma)$ is weakly decreasing in π ; and, by inspection, $\hat{q}(n; \pi, \sigma)$ is increasing in π . Thus, $\Delta(\pi, \sigma)$ is decreasing in π .

We now show that $\Delta(1, \sigma) < 0$. Since $\Delta^p(\sigma) \leq 0$ (Lemma 1(b)) and $\alpha < 1$ (by assumption), to prove that $\Delta(1, \sigma) < 0$, it is sufficient to show that $\Delta^e(1, \sigma) < 0$. If $\pi = 1$, then $\hat{q}(n; 1) = 1$, so the low-ability Leader's probability of reelection from proposing a = n is F(1). Thus, to show that $\Delta^e(1, \sigma) < 0$, we must show that the low-ability Leader's expected probability of reelection from proposing a = x is less than F(1). By inspection of $\hat{q}(x, d; 1, \sigma)$, for any ruling d, $\hat{q}(x, d; 1, \sigma) < 1$. This fact, taken together with the fact that F is increasing in the Leader's reputation \hat{q} , implies that for any ruling d, $F(\hat{q}(x, d; 1, \sigma)) < F(1)$. Hence, the low-ability Leader's expected probability of reelection from proposing a = x is less than F(1).

<u>Proof of part (b).</u> Suppose that $\Delta(0,\sigma) > 0$. We know from part (a) that when $\pi = 1$, $\Delta(1,\sigma) < 0$. Since $\Delta(0,\sigma) > 0$ and $\Delta(1,\sigma) < 0$, any solution to $\Delta(\pi,\sigma) = 0$ in π lies in (0,1). Moreover, since Δ is continuous in π , $\Delta(0,\sigma) > 0$, and $\Delta(1,\sigma) < 0$, the Intermediate Value Theorem ensures that there exists $\hat{\pi} \in (0,1)$ such that $\Delta(\hat{\pi},\sigma) = 0$. That the solution to $\Delta(\pi,\sigma) = 0$ in π is unique follows from the fact that Δ is decreasing in π (see part (a)).

To state the next lemma, we define a function ψ that maps the Judge's strategy into a probability that the low-ability Leader selects a = x.

$$\psi(\sigma) \equiv \begin{cases} 0, & \text{if } \Delta(0, \sigma) \le 0\\ \hat{\pi} \in (0, 1), & \text{otherwise, where } \hat{\pi} \text{ is the unique solution to } \Delta(\pi, \sigma) = 0 \text{ in } \pi \end{cases}$$

Lemma 3 In any equilibrium $(\pi^*, \sigma^*, \hat{q}, \hat{p}), \pi^* = \psi(\sigma^*).$

<u>Proof.</u> Let $(\pi^*, \sigma^*, \hat{q}, \hat{p})$ denote an equilibrium. Then the low-ability Leader's net benefit from proposing a = x is given by $\Delta(\pi^*, \sigma^*)$. We need to show that $\pi^* = \psi(\sigma^*)$.

Begin by supposing that $\Delta(0, \sigma^*) \leq 0$. And, by way of contradiction, suppose that $\pi^* \neq \psi(\sigma^*)$,

i.e. $\pi^* > 0$. $\pi^* > 0$ implies that the low-ability Leader's net benefit from selecting a = x is nonnegative. Hence, $\Delta(\pi^*, \sigma^*) \ge 0$. To derive a contradiction, notice the following: By supposition, $\Delta(0, \sigma^*) \le 0$, and, by part (a) of Lemma 2, $\Delta(\pi, \sigma^*)$ is decreasing in π . Together, these observations imply that $\Delta(\pi^*, \sigma^*) < 0$, a contradiction.

Now suppose that $\Delta(0, \sigma^*) > 0$. Notice that π^* cannot equal 0 or 1. If $\pi^* = 0$, then $\Delta(0, \sigma^*) \le 0$, which yields a contradiction. If $\pi^* = 1$, then $\Delta(1, \sigma^*) \ge 0$. However, by part (a) of Lemma 2, we know that $\Delta(1, \sigma^*) < 0$, which yields a contradiction. It follows that $\pi^* \in (0, 1)$, which implies that the low-ability Leader's net benefit from a = x equals zero: $\Delta(\pi^*, \sigma^*) = 0$. Since the solution to $\Delta(\pi, \sigma^*) = 0$ in π is unique, it follows that $\pi^* = \psi(\sigma^*)$.

Proof of Proposition 1. The game without judicial review is strategically equivalent to the game with judicial review provided that the Judge employs a passive strategy. Thus, by Lemma 3, the low-ability Leader's equilibrium strategy, π_{norev}^* , is uniquely defined, where $\pi_{norev}^* = \psi(1,1)$. Next, observe that $\Delta(0,(1,1)) = \alpha(1-2p) + (1-\alpha) \left(F(1) - F\left(\frac{pq}{pq+(1-q)}\right)\right)$. Hence, $\Delta(0,(1,1)) \leq 0$ if and only if $\alpha \geq \bar{\alpha} \equiv \frac{F(1) - F\left(\frac{pq}{pq+1-q}\right)}{2p-1+F(1)-F\left(\frac{pq}{pq+1-q}\right)}$.

<u>Proof of part (a).</u> Suppose $\alpha = 0$. As $\alpha < \bar{\alpha}$, $\Delta(0, (1, 1)) > 0$, and so by Lemma 3, π^*_{norev} is the unique solution to $\Delta(\pi, (1, 1)) = \Delta^e(\pi, (1, 1)) = 0$ in π . This fact, together with part (a) of Lemma 1, implies that $\pi^*_{norev} = 1 - p$.

<u>Proof of part (b).</u> Suppose that $\alpha \in [0, \bar{\alpha})$. We need to show that π_{norev}^* decreases as α increases. As $\alpha < \bar{\alpha}$, $\Delta(0, (1, 1)) > 0$, and so by Lemma 3, $\Delta(\pi_{norev}^*, (1, 1)) = 0$. This fact, taken together with the fact that $\Delta^p(1, 1) < 0$ (Lemma 1(b)), implies that $\Delta^e(\pi_{norev}^*, (1, 1)) \ge 0$. Consequently, $\frac{\partial \Delta(\pi_{norev}^*, (1, 1))}{\partial \alpha} = \Delta^p(1, 1) - \Delta^e(\pi_{norev}^*, (1, 1)) < 0$. The fact that Δ is differentiable in α , taken together with the fact that $\frac{\partial \Delta}{\partial \pi} < 0$ (Lemma 2(a)), allows us to apply the Implicit Function Theorem to sign the effect of a change in α on π_{norev}^* . Applying the Implicit Function Theorem, it follows that $\frac{\partial \pi_{norev}^*}{\partial \alpha} = \frac{-\Delta(\pi_{norev}^*, (1, 1))}{\frac{\partial \Delta(\pi_{norev}^*, (1, 1))}{\partial \pi}}$. Since the numerator is positive and the denominator is negative, $\frac{\partial \pi_{norev}^*}{\partial \alpha} < 0$.

Proof of part (c). Suppose that $\alpha \geq \bar{\alpha}$. Thus, $\Delta(0, (1, 1)) \leq 0$. Therefore, by Lemma 3, $\pi^*_{norev} = 0$.

Proof of Proposition 2.

Proof of part (a). Result is immediate.

Proof of part (b). Consider an equilibrium in which the Judge uses a strict strategy (i.e., $\sigma_n^* =$

 $\sigma_x^* = 0$). Notice that $\Delta^e(\pi, (0, 0)) = \Delta^e(\pi, (1, 1))$ and that $\Delta^p(0, 0) = 0$ (the latter equality follows from Lemma 1(b)). Thus, the low-ability Leader's net payoff from a = x when the Judge uses a strict strategy is $\Delta(\pi, (0, 0)) = (1 - \alpha)\Delta^e(\pi, (1, 1))$. Since $\Delta^e(0, (1, 1)) > 0$ (Lemma 1(a)), it follows from Lemma 3 that π^*_{strict} is the unique solution to $\Delta(\pi, (0, 0)) = 0$ in π . Since $\Delta(\pi, (0, 0)) = 0$ if and only if $\Delta^e(\pi, (1, 1)) = 0$, it follows from part (a) of Lemma 1 that $\pi^*_{strict} = 1 - p$.

All that remains to establish is that $\pi^*_{strict} \ge \pi^*_{norev}$. This follows from the fact that $\pi^*_{norev} \le 1-p$ (Proposition 1).

<u>Proof of part (c).</u> Consider an equilibrium in which the Judge uses an active strategy (i.e., $\sigma_n^* = 0, \sigma_x^* = 1$). It follows from Lemma 3 that the level of posturing in such an equilibrium, π_{act}^* , is uniquely defined, where $\pi_{act}^* = \psi(0, 1)$. That the ordering of π_{act}^* and π_{norev}^* is ambiguous can be seen from the following pair of examples. Consider a parametrization of our model in which $\alpha = 0, q = 0.5, p = 0.8, F(\hat{q}) = \hat{q}$, and $\gamma = 0.781$. Then, $\pi_{norev}^* = 0.2 > 0.1326 \approx \pi_{act}^*$. Next, consider a parametrization in which $\alpha = 0.2, q = 0.5, p = 0.8, F(\hat{q}) = \hat{q}$, and $\gamma = 0.781$. Then, $\pi_{norev}^* = 0.2 > 0.1326 \approx \pi_{act}^*$. Next, $\pi_{norev}^* \approx 0.1195 < 0.1300 \approx \pi_{act}^*$.

Proof of Proposition 3. Consider an equilibrium in which the low-ability Leader proposes a = x with probability π^* . In such an equilibrium, the probability that the Judge assigns to $\omega = n$ when her signal of the state is s and a = x is $\hat{p}(s; \pi^*)$. Thus, the Judge's expected payoff from upholding a = x is $1 - \hat{p}(s; \pi^*)$, whereas her expected payoff from overruling a = x is $\hat{p}(s; \pi^*)$. As a result, when $\hat{p}(s; \pi^*) < \frac{1}{2}$, the Judge maximizes her expected payoff by upholding the Leader; in contrast, when $\hat{p}(s; \pi^*) > \frac{1}{2}$, the Judge maximizes her expected policy payoff by overruling the Leader; finally, when $\hat{p}(s; \pi^*) = \frac{1}{2}$, the Judge is indifferent between upholding and overruling the Leader. Now notice that $\hat{p}(n; \pi^*) \leq \frac{1}{2}$ iff $\pi^* \leq \underline{T}$, whereas $\hat{p}(x; \pi^*) \leq \frac{1}{2}$ iff $\pi^* \leq \overline{T}$. Parts (a) through (e) of this proposition follow from the preceding observations taken together with the fact that $\underline{T} < \overline{T}$.

Proof of Proposition 4.

Proof of parts (a), (b), and (c). See the main text.

<u>Proof of part (d)</u>. Existence. Given Proposition 3, we have the following: if $\pi_{pass}^* \leq \underline{T}$, a passive equilibrium exists; if $\pi_{act}^* \in [\underline{T}, \overline{T}]$, an active equilibrium exists; and if $\pi_{strict}^* \geq \overline{T}$, a strict equilibrium exists. So, consider the remaining possibility: a situation in which neither a passive nor an active nor a strict equilibrium exists. In other words, $\pi_{pass}^* > \underline{T}$ and $\pi_{act}^* \notin [\underline{T}, \overline{T}]$ and $\pi_{strict}^* < \overline{T}$. Thus, either $\pi_{act}^* < \underline{T} < \pi_{pass}^*$ or $\pi_{strict}^* < \overline{T} < \pi_{act}^*$. In the former case, we will show

that there exists an equilibrium in which the Judge mixes when s = n. And in the latter case, we will show that there exists an equilibrium in which the Judge mixes when s = x.

Suppose $\pi_{act}^* < \underline{T} < \pi_{pass}^*$. Thus, we have that $\Delta(\pi_{act}^*, (0, 1)) \leq 0$ and $\Delta(\pi_{pass}^*, (1, 1)) = 0$ (as π_{pass}^* is a non-degenerate probability). These facts, taken together with the fact that Δ is decreasing in π (Lemma 2(a)), imply that $\Delta(\underline{T}, (0, 1)) < 0$ and $\Delta(\underline{T}, (1, 1)) > 0$. This implication, taken together with the fact that Δ is continuous in σ_n , ensures that the Intermediate Value Theorem applies. Thus, the equation $\Delta(\underline{T}, (\sigma_n, 1)) = 0$ has a solution in σ_n on (0, 1). Denoting this solution by $\bar{\sigma}_n$, it is easily verified that the strategy profile in which $\pi^* = \underline{T}, \sigma_n^* = \bar{\sigma}_n$, and $\sigma_x^* = 1$ (together with beliefs $\hat{q}(\cdot, \cdot; \pi^*, \sigma^*)$ and $\hat{p}(\cdot; \pi^*)$) constitutes an equilibrium.

Now suppose that $\pi^*_{strict} < \overline{T} < \pi^*_{act}$. As both π^*_{strict} and π^*_{act} are non-degenerate probabilities, we have that $\Delta(\pi^*_{srict}, (0, 0)) = 0$ and $\Delta(\pi^*_{act}, (0, 1)) = 0$. These facts, taken together with the fact that Δ is decreasing in π , imply that $\Delta(\overline{T}, (0, 0)) < 0$ and $\Delta(\overline{T}, (0, 1)) > 0$. This implication, taken together with the fact that Δ is continuous in σ_x , ensures that the Intermediate Value Theorem applies. Thus, the equation $\Delta(\overline{T}, (0, \sigma_x)) = 0$ has a solution in σ_x on (0, 1). Denoting this solution by $\bar{\sigma}_x$, it is easily verified that the strategy profile in which $\pi^* = \overline{T}, \sigma^*_n = 0$, and $\sigma^*_x = \bar{\sigma}_x$ (together with beliefs $\hat{q}(\cdot, \cdot; \pi^*, \sigma^*)$ and $\hat{p}(\cdot; \pi^*)$) constitutes an equilibrium.

Multiplicity. We now provide an example in which more than one judicial strategy is consistent with equilibrium behavior. Suppose that $\alpha = 0.2$, q = 0.5, p = 0.8, $F(\hat{q}) = \hat{q}$, and $\gamma = 0.651$. Then $\pi^*_{pass} \approx 0.1195$, $\pi^*_{act} \approx .1590$, $\underline{T} \approx 0.1548$, $\overline{T} \approx 0.8738$. Since $\pi^*_{pass} \leq \underline{T}$, a passive equilibrium exist. And since $\pi^*_{act} \in [\underline{T}, \overline{T}]$, an active equilibrium also exists.

Example in which all equilibria involve the Judge using a mixed strategy. We now provide an example in which no equilibrium exists in which the Judge uses a pure strategy. It follows from Proposition 3 that in any equilibrium in which the Judge's strategy is pure, her strategy is either passive, active, or strict. This fact, together with Proposition 3, implies that if an equilibrium exists in which the Judge's strategy is pure, either $\pi_{pass}^* \leq \underline{T}$, $\pi_{act}^* \in [\underline{T}, \overline{T}]$, or $\pi_{strict}^* \geq \overline{T}$. Now consider the case in which $\alpha = 0$, q = 0.5, p = 0.8, $F(\hat{q}) = \hat{q}$, and $\gamma = 0.601$. Then $\pi_{pass}^* = 0.2$, $\pi_{act}^* \approx 0.1916$, $\pi_{strict}^* = 0.2$, $\underline{T} \approx 0.1990$, $\overline{T} \approx 0.6040$. But then $\pi_{pass}^* > \underline{T}$, $\pi_{act}^* < \underline{T}$, and $\pi_{strict}^* < \overline{T}$. As a result, there does not exist an equilibrium in which the Judge's strategy is pure.

Proof of Proposition 5.

Proof of part (a). Suppose judicial review induces a passive equilibrium. Then the low-ability

Leader proposes a = x with probability π_{pass}^* , which is equivalent to π_{norev}^* . Hence, the Voter's current policy payoff with review is equivalent to that with no review.

<u>Proof of part (b).</u> Suppose judicial review induces a non-passive equilibrium in which the lowability Leader's equilibrium strategy is π^* and the Judge's equilibrium strategy is (σ_n^*, σ_x^*) . And begin by noticing that the Voter's equilibrium current payoff with review $V(\pi^*, (\sigma_n^*, \sigma_x^*)) \ge V(\pi^*, (1, 1))$. (This is because the Judge shares the Voter's policy preferences and overrules the Leader only when doing so would weakly improve the Voter's expected payoff.) Thus, when $\pi^* = \pi_{norev}^*$, meaning review has no effect on the level of posturing, $V(\pi^*, (\sigma_n^*, \sigma_x^*)) \ge V(\pi_{norev}^*, (1, 1))$. Hence, when review has no effect on posturing, the Voter's current policy payoff with review is at least as great as that without review. Now consider the case in which $\pi^* < \pi_{norev}^*$, i.e. review diminishes posturing. Notice that

$$\frac{\partial V(\pi,(1,1))}{\partial \pi} = -(1-q)(2p-1)$$

is negative, since $p > \frac{1}{2}$ and $q \in (0,1)$. The fact that $V(\pi,(1,1))$ is decreasing in π , taken together with the fact that $\pi^* < \pi^*_{norev}$, implies that $V(\pi^*,(1,1)) > V(\pi^*_{norev},(1,1))$. This fact, taken together with the fact that $V(\pi^*,(\sigma^*_n,\sigma^*_x)) \ge V(\pi^*,(1,1))$, implies that $V(\pi^*,(\sigma^*_n,\sigma^*_x)) >$ $V(\pi^*_{norev},(1,1))$. Consequently, when non-passive review reduces posturing, the Voter's equilibrium current policy payoff with review is greater than that without review.

<u>Proof of part (c).</u> We now provide two examples in which judical review exacerbates posturing, one in which judicial review strictly decreases the Voter's current policy payoff and one in which review strictly increases the Voter's current policy payoff. Consider a parametrization of our model in which $\alpha = 0.2$, q = 0.5, p = 0.8, $F(\hat{q}) = \hat{q}$, and $\gamma = 0.701$. Then, $\pi_{norev}^* \approx 0.1195$. With review, the unique equilibrium is active, where $\pi_{act}^* \approx 0.1517$. Thus, the Voter's current policy payoff with review is $V(0.1195, (1, 1)) \approx 0.8642$, whereas the Voter's current policy payoff with review is $V(0.1517, (0, 1)) \approx 0.8626$. Consequently, in this example, the introduction of judicial review strictly decreases the Voter's current policy payoff. Now consider a parametrization identical to the preceding one with the exception of the accuracy γ of the Judge's signal: continue to fix $\alpha = 0.2$, q = 0.5, p = 0.8, and $F(\hat{q}) = \hat{q}$, but now set $\gamma = 0.781$. (Thus, relative to the preceding example, the accuracy of the Judge's signal is now higher.) Then, $\pi_{norev}^* \approx 0.1195$. With review, the unique equilibrium is active, where $\pi_{act}^* \approx 0.1300$. Thus, the Voter's current policy payoff with review, the unique equilibrium is active, where $\pi_{act}^* \approx 0.1300$. Thus, the Voter's current policy payoff with review.

is $V(0.1300, (0, 1)) \approx 0.8769$. Consequently, in this example, the introduction of judicial review strictly increases the Voter's current policy payoff despite exacerbating posturing.

We now prove three lemmas. Lemma 4 (parts (a) and (b)), Lemma 5, and Lemma 6 will be invoked in proving Proposition 6. Lemma 4 (parts (c) and (d)) will be invoked in our subsequent discussion of the high-ability Leader's incentives in the robustness section.

Lemma 4 Consider an equilibrium $(\pi^*, \sigma^*, \hat{q}, \hat{p})$ in which $\sigma_x^* > \sigma_n^*$ (i.e., the Judge's probability of upholding a = x when s = x is greater than that when s = n).

- (a) Suppose that the high-ability Leader conforms to his equilibrium strategy (proposing a = xif, but only if, $\omega = x$). Then the probability that the high-ability Leader is upheld when he proposes a = x is strictly greater than that of the low-ability Leader: $\lambda(h, \sigma^*) > \lambda(l, \sigma^*)$.
- (b) The Leader's reputation upon being upheld is greater than that when overruled: $\hat{q}(x, uphold; \pi^*, \sigma^*)$ > $\hat{q}(x, strike; \pi^*, \sigma^*)$.
- (c) The low-ability Leader's net electoral payoff from proposing a = x is less than the high-ability Leader's net electoral payoff from proposing a = x when $\omega = x$:

$$\begin{split} \lambda(l,\sigma^{*})F(\hat{q}(x,uphold;\pi^{*},\sigma^{*})) &+ (1-\lambda(l,\sigma^{*}))F(\hat{q}(x,strike;\pi^{*},\sigma^{*})) - F(\hat{q}(n;\pi^{*})) < \\ \lambda(h,\sigma^{*})F(\hat{q}(x,uphold;\pi^{*},\sigma^{*})) &+ (1-\lambda(h,\sigma^{*}))F(\hat{q}(x,strike;\pi^{*},\sigma^{*})) - F(\hat{q}(n;\pi^{*})). \end{split}$$
(A2)

(d) The low-ability Leader's net electoral payoff from proposing a = x is greater than the highability Leader's net electoral payoff from proposing a = x when $\omega = n$:

$$\begin{aligned} \lambda(l,\sigma^{*})F(\hat{q}(x,uphold;\pi^{*},\sigma^{*})) + (1-\lambda(l,\sigma^{*}))F(\hat{q}(x,strike;\pi^{*},\sigma^{*})) - F(\hat{q}(n;\pi^{*})) > \\ z(\sigma^{*})F(\hat{q}(x,uphold;\pi^{*},\sigma^{*})) + (1-z(\sigma^{*}))F(\hat{q}(x,strike;\pi^{*},\sigma^{*})) - F(\hat{q}(n;\pi^{*})), \end{aligned}$$
(A3)

where $z(\sigma^*) \equiv \sigma_x^*(1-\gamma) + \sigma_n^*\gamma$ is the probability that the Judge upholds a = x given that $\omega = n$ and her strategy is σ^* .

Proof:

<u>Proof of part (a).</u> Consider an equilibrium in which $\sigma_x^* > \sigma_n^*$ and recall the definitions of $\lambda(h, \sigma)$ and $\lambda(l, \sigma)$ on p. 2 of this appendix. Then it follows (via algebra) that $\lambda(h, \sigma^*) > \lambda(l, \sigma^*)$. <u>Proof of part (b).</u> Consider an equilibrium in which $\sigma_x^* > \sigma_n^*$. Thus, the Leader is both upheld and overruled with positive probability, which implies that in each instance the Voter's posterior about the Leader's ability can be derived via Bayes' Rule. Hence, $\hat{q}(x, uphold; \pi^*, \sigma^*) = \frac{\lambda(h,\sigma)(1-p)q}{\lambda(h,\sigma)(1-p)q+\lambda(l,\sigma)\pi(1-q)}$ and $\hat{q}(x, strike; \pi^*, \sigma^*) = \frac{[1-\lambda(h,\sigma)](1-p)q}{[1-\lambda(h,\sigma)](1-p)q+[1-\lambda(l,\sigma)]\pi(1-q)}$. Now notice that $\hat{q}(x, uphold; \pi^*, \sigma^*) > \hat{q}(x, strike; \pi^*, \sigma^*)$ if and only if $\lambda(h, \sigma^*) > \lambda(l, \sigma^*)$. Thus, by part (a) of this lemma, our desired conclusion follows.

<u>Proof of part (c)</u>. That inequality (A2) holds follows from parts (a) and (b) of this lemma, taken together with the fact that F is increasing in \hat{q} .

<u>Proof of part (d)</u>. Consider an equilibrium in which $\sigma_x^* > \sigma_n^*$. It thus follows (via algebra) that $\lambda(l, \sigma^*) > z(\sigma^*)$. This fact, taken together with the fact that $\hat{q}(x, uphold; \pi^*, \sigma^*) > \hat{q}(x, strike; \pi^*, \sigma^*)$ (see part (b) of this lemma) and the fact that F is increasing in \hat{q} , implies that inequality (A3) holds.

Lemma 5 Consider an equilibrium with review $(\pi^*, \sigma^*, \hat{q}, \hat{p})$ in which $\sigma_x^* > \sigma_n^*$. In addition, suppose that $\alpha = 0$ and that the electoral strength function F is concave. The equilibrium probability with which low-ability Leader selects the extraordinary action with review, π^* , is less than that with no review, π_{norev}^* .

<u>Proof.</u> Suppose $\alpha = 0$ and the electoral strength function F is concave. Consider an equilibrium with review $(\pi^*, \sigma^*, \hat{q}, \hat{p})$ in which $\sigma_x^* > \sigma_n^*$. We need to show that the equilibrium probability with which low-ability Leader selects the extraordinary action with review, π^* , is less than that with no review, π_{norev}^* .

Because $\alpha = 0$, $\Delta(\pi, \sigma) = \Delta^e(\pi, \sigma)$. Also, notice that when $\pi = 0$, $\Delta^e(0, \sigma) = F(1) - F\left(\frac{pq}{pq+(1-q)}\right) > 0$. As $\Delta(0, \sigma) = \Delta^e(0, \sigma) > 0$, it follows from Lemma 3 that in any equilibrium in which the Judge uses strategy σ , the low-ability Leader's equilibrium strategy is the unique solution to $\Delta^e(\pi, \sigma) = 0$ in π on (0,1). Thus, in the absence of review, the low-ability Leader's equilibrium strategy, π^*_{norev} , is the solution to $\Delta^e(\pi, (1, 1)) = 0$ in π . And with review, the low-ability Leader's equilibrium strategy, π^* , is the solution to $\Delta^e(\pi, (\sigma^*_n, \sigma^*_x)) = 0$ in π .

In light of the above, and the fact that $\Delta(\pi, \sigma)$ is decreasing in π , in order to show that $\pi^*_{norev} > \pi^*$, it is sufficient to show that for all $\pi \in (0, 1)$, $\Delta^e(\pi, (1, 1)) > \Delta^e(\pi, (\sigma^*_n, \sigma^*_x))$. This is

equivalent to showing that for all $\pi \in (0, 1)$,

$$F(\hat{q}(x;\pi)) > \lambda(l,\sigma^*)F(\hat{q}(x,uphold;\pi,\sigma^*)) + (1-\lambda(l,\sigma^*))F(\hat{q}(x,strike;\pi,\sigma^*)).$$
(A4)

We now turn to showing that inequality (A4) in fact holds. Write $Pr(uphold; \pi, \sigma^*)$ for the equilibrium probability the Leader is upheld conditional upon a = x having been proposed. Hence, $Pr(uphold; \pi, \sigma^*) = \hat{q}(x; \pi)\lambda(h, \sigma^*) + (1 - \hat{q}(x; \pi))\lambda(l, \sigma^*)$. Now notice that by the Martingale property of Bayesian posteriors,

$$\hat{q}(x;\pi) = Pr(uphold;\pi,\sigma^*)\hat{q}(x,uphold;\pi,\sigma^*) + (1 - Pr(uphold;\pi,\sigma^*))\hat{q}(x,strike;\pi,\sigma^*).$$

Given our supposition that $\sigma_x^* > \sigma_n^*$, it follows that $\lambda(h, \sigma^*) > \lambda(l, \sigma^*)$ (Lemma 4(a)) and that $\hat{q}(x, uphold; \pi, \sigma^*) > \hat{q}(x, strike; \pi, \sigma^*)$ (Lemma 4(b)). That $\lambda(h, \sigma^*) > \lambda(l, \sigma^*)$ implies that $Pr(uphold; \pi, \sigma^*) > \lambda(l, \sigma^*)$. This fact, taken together with the fact that $\hat{q}(x, uphold; \pi, \sigma^*) > \hat{q}(x, strike; \pi, \sigma^*)$, implies that

$$\begin{split} \hat{q}(x;\pi) &= Pr(uphold;\pi,\sigma^*)\hat{q}(x,uphold;\pi,\sigma^*) + (1 - Pr(uphold;\pi,\sigma^*))\hat{q}(x,strike;\pi,\sigma^*) > \\ &\lambda(l,\sigma^*)\hat{q}(x,uphold;\pi,\sigma^*) + (1 - \lambda(l,\sigma^*))\hat{q}(x,strike;\pi,\sigma^*). \end{split}$$

This preceding inequality, taken together with the fact that F is increasing in \hat{q} , implies that

$$F(\hat{q}(x;\pi)) > F(\lambda(l,\sigma^*)\hat{q}(x,uphold;\pi,\sigma^*) + (1-\lambda(l,\sigma^*))\hat{q}(x,strike;\pi,\sigma^*)).$$

The concavity of F implies that

$$\begin{split} F(\lambda(l,\sigma^*)\hat{q}(x,uphold;\pi,\sigma^*) + (1-\lambda(l,\sigma^*))\hat{q}(x,strike;\pi,\sigma^*)) > \\ \lambda(l,\sigma^*)F(\hat{q}(x,uphold;\pi,\sigma^*)) + (1-\lambda(l,\sigma^*))F(\hat{q}(x,strike;\pi,\sigma^*)) \end{split}$$

The preceding two inequalities, taken together, imply that $F(\hat{q}(x;\pi)) > \lambda(l,\sigma^*)F(\hat{q}(x,uphold;\pi,\sigma^*))$ + $(1 - \lambda(l,\sigma^*))F(\hat{q}(x,strike;\pi,\sigma^*))$. Consequently, for all $\pi \in (0,1)$, inequality (A4) holds.

Lemma 6 Define $\pi^*(\alpha)$ to be the probability with which the low-ability Leader selects a = x in an equilibrium in which the Judge employs strategy σ^* and the weight attached to policy is α . $\pi^*(\alpha)$ is

<u>Proof.</u> Suppose an equilibrium exists in which the Judge uses strategy σ^* . In addition, suppose that $\alpha = 0$. Because $\alpha = 0$, $\Delta(\pi, \sigma^*) = \Delta^e(\pi, \sigma^*)$. Also, notice that when $\pi = 0$, $\Delta^e(0, \sigma^*) = F(1) - F\left(\frac{pq}{pq+(1-q)}\right) > 0$. Since $\Delta(0, \sigma^*) = \Delta^e(0, \sigma^*) > 0$, it follows from Lemma 3 that in any equilibrium in which the Judge uses strategy σ^* , the low-ability Leader's equilibrium strategy, $\pi^*(0)$, is the unique solution to $\Delta(\pi, \sigma^*) = 0$ in π on (0,1). The fact that $\Delta(\pi^*(0), \sigma^*) = 0$, taken together with the fact that Δ is differentiable in α and the fact that $\frac{\partial \Delta}{\partial \pi} \neq 0$ (see the proof of Lemma 2(a)), enables us to invoke the Implicit Function Theorem in order to conclude that $\pi^*(\alpha)$ is continuous in α on an open neighborhood of 0.

Proof of Proposition 6.

<u>Proof of part (a).</u> Suppose $q \in \left(\frac{p-\gamma}{p}, \frac{p+\gamma-1}{p}\right)$ and that F is concave. That $q > \frac{p-\gamma}{p}$ implies strict equilibria never exist (Proposition 4(b)). Hence, it follows from Proposition 3 that in an equilibrium, the Judge either uses a passive strategy, an active strategy, or she mixes. This fact, together with the fact that mixing only arises in equilibrium when the level of posturing equals \underline{T} or \overline{T} (Proposition 3), implies that the equilibrium level of posturing with review takes one of the following four values: π_{pass}^* , π_{active}^* , \underline{T} , or \overline{T} .

We need to show that the Voter's current policy payoff with review is strictly greater than that without review when α is sufficiently small. A sufficient condition for review to strictly increase the Voter's current policy payoff is that review strictly decreases the equilibrium level of posturing (Proposition 5(b)). Thus, we first show that when $\alpha = 0$, the probability with which the low-ability Leader selects a = x is strictly less than that with no review. We then show that this remains true provided α is sufficiently small.

So, suppose that $\alpha = 0$. Thus, Proposition 2(a), taken together with Proposition 1(a), implies that $\pi_{pass}^* = 1 - p$. This fact, taken together with Proposition 3, implies that a passive equilibrium exists only if $1 - p \leq \underline{T}$. This inequality holds only if $q \geq \frac{p+\gamma-1}{p}$. By supposition, however, $q < \frac{p+\gamma-1}{p}$. Thus, when $\alpha = 0$, a passive equilibrium does not exist. Hence, in any equilibrium with review, the level of posturing when $\alpha = 0$ is an element of the set $\{\underline{T}, \pi_{act}^*(0), \overline{T}\}$. Further, since equilibria are neither passive nor strict when $\alpha = 0$, $\sigma_x^* > \sigma_n^*$ (an implication of Proposition 3). Thus, Lemma 5 applies. Consequently,

$$\max\{\underline{T}, \pi^*_{act}(0), \overline{T}\} < \pi^*_{norev}(0)$$

Since \underline{T} and \overline{T} are independent of α (Remark 2), and $\pi^*_{norev}(\alpha)$ and $\pi^*_{act}(\alpha)$ are both continuous in α on an open neighborhood of 0 (Lemma 6), it follows that for α sufficiently small

$$\max\{\underline{T}, \pi_{act}^*(\alpha), \overline{T}\} < \pi_{norev}^*(\alpha).$$
(A5)

This implies that for α sufficiently small, the equilibrium probability with which the low-ability Leader selects a = x with review is strictly less than that with no review. To see why, suppose that inequality (A5) holds. Since $\pi_{norev}^*(\alpha) = \pi_{pass}^*(\alpha)$ (Proposition 2(a)), it follows that $\pi_{pass}^*(\alpha) > \underline{T}$, meaning that a passive equilibrium does not exist. Consequently, the equilibrium probability with which the low-ability Leader selects a = x is an element of $\{\underline{T}, \pi_{act}^*(\alpha), \overline{T}\}$. Thus, when inequality (A5) holds, the level of posturing with review is strictly less than that without review.

(A5) holds, the level of posturing with review is strictly less than that without review. <u>Proof of part (b).</u> Suppose that $\alpha \geq \bar{\alpha} \equiv \frac{F(1)-F\left(\frac{pq}{pq+1-q}\right)}{2p-1+F(1)-F\left(\frac{pq}{pq+1-q}\right)}$. Then, it follows from Proposition 1(c) that in the absence of review, $\pi^*_{norev} = 0$. As such, the Voter can never benefit from review as the low-ability Leader is a perfect agent of the Voter in the absence of review. As $\pi^*_{norev} = 0$, the Voter's expected payoff in the absence of review is q + (1-q)p. Now consider the case in which $q \leq \frac{p-\gamma}{p}$. By part (b) of Proposition 4, a strict equilibrium exists. The Voter's expected policy payoff from such an equilibrium is p. Clearly, this payoff is strictly lower than the Voter's payoff in the absence of review.

C Robustness

C.1 On judicial expertise

In the main text, we assumed that $\gamma < p$: we restricted the accuracy of the Judge's signal of the state to be less than the prior probability that $\omega = n$. Under this restriction, we established that review could harm the Voter's current policy payoff. This possibility remains even when one allows the accuracy γ of the Judge's signal to exceed p. Even more surprising, this possibility remains even when the accuracy of the Judge's signal approaches perfection (i.e., $\gamma \approx 1$). Figure A1 extends

the example in Figure 3, allowing γ to exceed p. Both Figure 3 and Figure A1 consider the case in which $\alpha = 0.4$, p = 0.8, and $F(\hat{q}) = \hat{q}$. In Figure 3, we restrict $\gamma \in (0.5, p)$. However, in Figure A1, we drop the restriction that $\gamma < p$ and allow γ to take any value between (0.5, 1). Figure A1 indicates that even as the accuracy γ of the Judge's signal of the state approaches 1, there exists a range of priors q for which the Voter's current policy payoff with review can be strictly lower than that without review. In particular, for each value of γ and q in the dark grey region of the rightmost panel of Figure A1, there exists a non-passive equilibrium that delivers the Voter a current policy payoff that is strictly lower than that which she receives in the absence of review. (Note, however, for each value of γ and q in the dark grey region, there also exists a passive equilibrium. Obviously, if judicial review induces this passive equilibrium, then review would have no effect on the Voter's current policy payoff.)

We now offer a numerical example in which $\gamma > p$ yet the possibility remains that review can harm the Voter's currently policy payoff. Suppose that $\alpha = 0.4$, q = 0.7, p = 0.8, $F(\hat{q}) = \hat{q}$, and $\gamma = 0.95$. Without review, $\pi^*_{norev} = 0$. With review, an active equilibrium exist in which $\pi^*_{act} \approx 0.0394$. Thus, the Voter's current policy payoff without review is V(0, (1, 1)) = 0.94, whereas the Voter's current policy payoff with review provided that the active equilibrium is selected is $V(0.0394, (0, 1)) \approx 0.9348$. Consequently, in this example, if judicial review induces the active equilibrium, then the Voter's current policy payoff with review is strictly less than her current policy payoff without review.

C.2 On the high-ability Leader's incentives and the justiciability of a = n.

In the main text, we assumed policy a = n is not justiciable. This is equivalent to assuming that the Judge always upholds the Leader when a = n is proposed. In addition, we assumed that the high-ability Leader matches policy to the state (i.e., selects $a = \omega$). We now establish the following two claims:

- (a) Given that the high-ability Leader matches policy to the state, upholding when a = n is consistent with equilibrium behavior for the Judge. (Hence, our assumption that only a = xis justiciable is benign.)
- (b) Matching policy to the state is consistent with equilibrium behavior for the high-ability Leader.

We begin with claim (a). Consider an equilibrium in which the high-ability Leader matches policy to the state and the low-ability Leader proposes the extraordinary action with probability π^* . We need to show that upholding the Leader when a = n is optimal for the Judge regardless of her signal of the state. That is, we need to show that for any signal $s \in \{n, x\}$, the Judge's posterior that $\omega = n$ when a = n is greater than 1/2. By Bayes' Rule,

$$Pr(\omega = n|s, a = n) = \frac{Pr(s|\omega = n)(q + (1 - q)(1 - \pi^*))p}{Pr(s|\omega = n)(q + (1 - q)(1 - \pi^*))p + Pr(s|\omega = x)(1 - q)(1 - \pi^*)(1 - p)}$$

Since $Pr(\omega = n | s = n, a = n) > Pr(\omega = n | s = x, a = n)$, it is sufficient to show that $Pr(\omega = n | s = x, a = n) > \frac{1}{2}$. Since $p > \gamma$ (by assumption),

$$Pr(\omega = n | s = x, a = n) > \frac{1}{2} \Leftrightarrow \pi^* < \frac{1}{(1-q)} \frac{(p-\gamma) + q\gamma(1-p)}{(p-\gamma)}$$

Finally, notice that $\pi^* < \frac{1}{(1-q)} \frac{(p-\gamma)+q\gamma(1-p)}{(p-\gamma)}$, as the left hand side is a probability and the right hand side is strictly greater than 1.

We now turn to claim (b). In our baseline model, we took it as given that the high-ability Leader matched policy to the state and solved for the equilibrium of the resulting game between the low-ability Leader, Judge, and Voter. It turns out that in an equilibrium of this resulting game, matching policy to the state is in fact incentive compatible for the high-ability Leader. To develop intuition as to why this is so, consider the case in which the equilibrium to the game between the low-ability Leader, Judge, and Voter is active. In such an equilibrium, $\sigma_n^* = 0$, $\sigma_x^* = 1$, and $\pi^* \in (0, 1)$. Since π^* is a non-degenerate probability, the low-ability Leader's net payoff from proposing a = x, $\Delta(\pi^*, \sigma^*) = \alpha \Delta^p(\sigma^*) + (1 - \alpha) \Delta^e(\pi^*, \sigma^*) = 0$. Now consider the incentives of the high-ability Leader. Unlike the low-ability Leader, he knows the state of the world when proposing policy. This has two implications:

- 1. The net policy gain to the high-ability Leader from proposing a = x when $\omega = x$ ($\omega = n$) is greater (less) than $\Delta^p(\sigma^*)$.
- 2. The net electoral gain to the high-ability Leader form proposing a = x when $\omega = x$ ($\omega = n$) is greater (less) than $\Delta^e(\pi^*, \sigma^*)$ (Lemma 4, parts (c) and (d)).

The preceding two implications, taken together with the fact $\Delta(\pi^*, \sigma^*) = 0$, imply that the highability Leader has a strict incentive to propose a = x (a = n) when $\omega = x$ $(\omega = n)$.

Although there always exists an equilibrium in which the high-ability Leader matches policy to the state, for completeness, we note that for certain parameterizations of our model, equilibria exist in which the high-ability Leader fails to match policy to the state. Examples include the following:

- With or without review, when α is sufficiently small, there exists an equilibrium in which both the high- and low-ability Leader always propose a = n. This equilibrium is supported by having the Voter believe that any Leader who makes the off-path proposal of a = x is of low ability. (Such equilibria, however, do not survive refinements that are in the spirit of universal divinity.)
- Suppose that there exists an active equilibrium with review, where the high-ability Leader matches policy to the state and the low-ability Leader selects a = x with probability π_{act}^* . If a = n is justiciable, then there also exists a payoff-equivalent equilibrium in which the high-ability Leader mismatches policy to the state (i.e., he selects a = n when $\omega = x$ and selects a = x when $\omega = n$), the low-ability Leader selects a = x with probability $(1 - \pi_{act}^*)$, the Judge always strikes down the proposal of a = x regardless of her signal, and when a = n is proposed, she strikes it down if and only if her signal s = x.

D Comparative Statics on Electoral Ambition

This section considers how variation in the Leader's electoral ambition (inversely measure by α) affects both equilibrium behavior and the Voter's policy payoff. We begin with the former. Figure A.2 provides an example in which moving from the case of high electoral ambition to low electoral ambition facilitates the existence of passive equilibria and impedes the existence of non-passive equilibria. The subsequent theorem demonstrates that this feature of the example is general.

Proposition 7 Fix p, q, γ , and F. And suppose that $\alpha' < \alpha''$.

- (a) If a passive equilibrium exists at α' , then a passive equilibrium exists at α'' .
- (b) If a non-passive equilibrium does not exist at α', then a non-passive equilibrium does not exist at α''.

Proof of part (a). Suppose that $\alpha' < \alpha''$. And suppose that a passive equilibrium exists at α' . Thus $\pi^*_{pass}(\alpha') \leq \underline{T}$. However, since π^*_{norev} is non-increasing in α (Proposition 1), and $\pi^*_{norev} = \pi^*_{pass}$, if follows that $\pi^*_{pass}(\alpha'') \leq \pi^*_{pass}(\alpha') \leq \underline{T}$, and so a passive equilibrium exists at α'' .

<u>Proof of part (b).</u> Suppose that $\alpha' < \alpha''$. And suppose that there does not exist a non-passive equilibrium at α' . This has several implications.

- (1) A passive equilibrium exist at α' : $\pi^*(\alpha') \leq \underline{T}$.
- (2) A strict equilibrium does not exist at α' : $\pi^*_{strict}(\alpha') < \overline{T}$.
- (3) An active equilibrium does not exist at α' : $\pi^*_{act}(\alpha') \notin [\underline{T}, \overline{T}]$.
- (4) There does not exist an equilibrium in which the Judge uses a mixed strategy at α':
 Δ(<u>T</u>, (σ_n, 1); α') = 0 lacks a solution in σ_n on (0,1) and Δ(<u>T</u>, (0, σ_x); α') = 0 lacks a solution in σ_x on (0,1).

If $\pi_{act}^*(\alpha') > \overline{T} > \pi_{strict}^*$, then we know from the proof of Proposition 4(d) that the equation $\Delta(\overline{T}, (0, \sigma_x); \alpha') = 0$ has a solution in σ_x on (0,1). This fact, together with our supposition that there does not exist a non-passive equilibrium at α' , implies that $\pi_{act}^*(\alpha') < \underline{T}$. With these facts in hand, we now show that the model does not admit a non-passive equilibrium at α'' .

As π^*_{strict} is independent of α , it follows that $\pi^*_{strict}(\alpha'') = \pi^*_{strict}(\alpha') < \overline{T}$. Consequently, there does not exist a strict equilibrium at α'' .

To prove that an active equilibrium does not exist at α'' , we first note that $\Delta^e(0, (0, 1)) > 0$ and $\Delta^e(1, (0, 1)) < 0$. The preceding facts, together with the fact that Δ^e is continuously decreasing in π on [0,1], imply that there exists a unique value of π in (0,1), say $\bar{\pi}$, such that $\Delta^e(\pi, (0,1)) \ge 0$ if and only if $\pi \le \bar{\pi}$. This fact, taken together with the fact that the low-ability Leader's net benefit from proposing a = x must be non-negative in any equilibrium in which he does so with positive probability, implies that $\pi^*_{act}(\alpha) \in [0, \bar{\pi}]$. Since $\pi^*_{act} < \underline{T}$, to prove that an active equilibrium does not exist, it suffices to show that $\pi^*_{act}(\alpha'') \le \pi^*_{act}(\alpha')$. And to show this, it suffices to show that $\Delta(\pi, (0, 1); \alpha'') < \Delta(\pi, (0, 1), \alpha')$ for all $\pi \in [0, \bar{\pi}]$. Differentiating $\Delta(\pi, (0, 1); \alpha)$ with respect to α yields:

$$\frac{\partial \Delta(\pi, (0, 1); \alpha)}{\partial \alpha} = \Delta^p(0, 1) - \Delta^e(\pi, (0, 1)).$$

This term is negative for all $\pi \in [0, \bar{\pi}]$, as $\Delta^p(0, 1) < 0$ (Lemma 1(b)) and $\Delta^e(\pi, (0, 1)) \geq 0$

(due to the fact that $\pi \leq \bar{\pi}$). Hence, $\Delta(\pi, (0, 1); \alpha'') < \Delta(\pi, (0, 1), \alpha')$ for all $\pi \in [0, \bar{\pi}]$, and so $\pi^*_{act}(\alpha'') \leq \pi^*_{act}(\alpha') < \underline{T}$, meaning that an active equilibrium does not exist at α'' .

One can use related proof techniques to rule out the existence of equilibria in which the Judge uses a mixed strategy at α'' .

As mentioned in the main text, one might conjecture that the benefits of review vis-a-vis no review are increasing in electoral ambition. As the next example illustrates, this is not always the case: Suppose that p = 0.9, q = 0.6, $\gamma = 0.65$, and $F(\hat{q}) = \hat{q}^9$. And begin by considering the case in which $\alpha = 0$ (i.e., the Leader cares only about reelection). Then, $\pi^*_{norev} = 0.1$. With review, the unique equilibrium is active, where $\pi^*_{act} \approx 0.1241$. Thus, the Voter's current policy payoff without review is V(0.1, (1, 1)) = 0.928, whereas the Voter's current policy payoff with review is $V(0.1241, (0, 1)) \approx 0.9266$. Consequently, when $\alpha = 0$, the introduction of judicial review strictly decreases the Voter's current policy payoff. Now consider the case in which the Leader places positive weight on policy; namely, suppose that $\alpha = 0.4$. Then, $\pi^*_{norev} \approx 0.0106$. With review, the unique equilibrium is passive. As a result, when $\alpha = 0.4$, the introduction of judicial review has no effect on the Voter's current policy payoff. Hence, in this example, review is inconsequential when electoral ambition is moderate ($\alpha = 0.4$), but is strictly harmful when electoral ambition is maximal ($\alpha = 0$).

Figure A1: The effect of judicial review on the Voter's current policy payoff when no restrictions are imposed on the accuracy γ of the Judge's signal of the state



*In each panel, we vary the level of judicial expertise γ along the horizontal axis and the prior q that the Leader is of high ability along the vertical axis, while holding fixed the other features of the model. The right-most panel indicates the effect of review on the Voter's expected current policy payoff:

- The Voter is strictly worse off with review in the black region.
- The Voter is weakly worse off with review in the dark grey region (i.e., in this region, there exists a passive equilibrium *and* a non-passive equilibrium, with the latter giving the Voter a strictly lower expected current policy payoff than that with no review).
- The Voter's expected current policy payoff is the same with and without review in the light grey region.
- The Voter is strictly better off with review in the white region.
- The Voter can be better or worse off with review in the blue region (i.e., in this region, there exists two non-passive equilibria, with one yielding a higher payoff and the other a lower payoff than that with no review).

**For the above simulations, we fix the prior p that the state of the world $\omega = n$ and the weight α that the Leader attaches to policy. In addition, we fix the function F that translates the Leader's reputation for being high ability into a probability of reelection. In particular, we set p = 0.8, $\alpha = 0.4$, and $F(\hat{q}) = \hat{q}$.



Figure A2: The effect of electoral ambition on the existence of passive and non-passive equilibria

*For the above simulations, we fix p = 0.8, $\alpha = 0.4$, and $F(\hat{q}) = \hat{q}$. The left-hand column indicates that the set of γ and q for which passive equilibria exist expands as electoral ambition (inversely measured by α) falls, while the right-hand column indicates that the set of γ and q for which non-passive equilibria exist shrinks as electoral ambition falls.