

# Judicial Review and Democratic Failure \*

Justin Fox<sup>†</sup>

Matthew C. Stephenson<sup>‡</sup>

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## Abstract

We use an agency model to analyze the impact of judicial review on democratic performance. We find that judicial review may increase democratic failure by rescuing elected officials from the consequences of ill-advised policies, but may also decrease democratic failure by alerting voters to unjustified government action. We further find that judges will defer to the decision of elected leaders unless the level of democratic failure is sufficiently high. We then show how judicial review affects voter welfare both through its effect on policy choice and through its effect on the efficacy of the electoral process in selecting leaders. We also analyze how the desirability of judicial review is affected by characteristics of the leaders and the judges. Our welfare analysis establishes general conditions under which judicial review serves majoritarian interests—and thereby arguably increases the “democratic” character of political outcomes, despite the non-democratic nature of judicial review itself.

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<sup>†</sup>Assistant Professor, Department of Political Science, Yale University, ISPS, P.O. Box 208209, New Haven, CT 06520. Email: [justin.fox@yale.edu](mailto:justin.fox@yale.edu)

<sup>‡</sup>Assistant Professor, Harvard Law School, Griswold 509, Cambridge, MA 02138. Email: [mstephen@law.harvard.edu](mailto:mstephen@law.harvard.edu)

What is the appropriate role for judicial review in a democracy? When should independent judges be allowed to strike down the decisions of elected legislatures or executives? This question is of enormous practical and theoretical interest. It has been a central focus—some might say an obsession—of American constitutional theory (Friedman 2002; Tribe 2000), and has assumed increasing salience internationally as the power and influence of courts around the world has grown (Hirschl 2004; Tate and Vallinder 1997). Many have defended judicial review as a means for reducing or correcting predictable, systematic failures in legislative and executive decision-making—thereby reducing the divergence between actual policy choices and those that would prevail in an ideally-functioning representative democracy. Appropriately designed judicial review, on this view, can be justified on democratic grounds, even if judicial review is not itself a democratic institution. Critics, however, have argued that judicial review tends to exacerbate rather than ameliorate democratic failures, and that the costs of judicial review typically exceed whatever benefits it may have.

This paper uses a formal model to analyze the impact of judicial review on democratic failure. The analysis elucidates the scope and limits of many of the positive theoretical claims that appear in debates about judicial review, and generates several additional implications. The paper is organized as follows. In Part I, we situate our contribution by presenting a brief overview of the contemporary debate about judicial review. In Part II, we develop a simple political agency model, without judicial review, which allows us to isolate a particular type of democratic failure: the incentive that elections create for less-capable incumbents to take bold action, in order to appear more competent than they really are. In Part III, we modify the baseline model by introducing judicial review, and we investigate how this institutional change affects the incidence and impact of the sort of democratic failure we identified in Part II. We show, first, that judicial review may have two effects on democratic failure: *first*, judicial review may rescue elected officials from the consequences of ill-advised policies, and this “bailout effect” tends to increase democratic failure; *second*, judicial approval or disapproval of a policy may affect public opinion of the government that enacted it, and this “legitimation effect” usually tends to decrease democratic failure. We next show that a rational judge’s review strategy depends on the level of democratic failure. If democratic failure is sufficiently rare, the judge would rationally defer to the elected leader, while if democratic failure

on some issue is sufficiently high, the judge would flatly prohibit government action in that area; judges rely on their own fallible analysis only for “intermediate” levels of democratic failure. We then combine these partial-equilibrium analyses to assess the positive impact of introducing judicial review, and how that impact varies as a function of the expertise of the judge, the expected quality of the elected leaders, and the relative value those leaders place on policy and reelection, respectively.

Part IV turns to normative considerations, focusing on how judicial review affects voter welfare both in the short term through its effect on policy choice, and in the long term through its effect on the efficacy of the electoral process in selecting good leaders. We also consider how the desirability of judicial review is affected by characteristics of the leaders and the judges. Our results here are sometimes surprising. For example, increasing the accuracy of judicial decision-making can sometimes make judicial review less desirable, and the adverse effects of judicial review are sometimes most pronounced in situations where review is most needed. More generally, our welfare analysis establishes conditions under which judicial review serves majoritarian interests—and thereby arguably increases the “democratic” character of political outcomes, despite the non-democratic nature of judicial review itself. Part V considers possible extensions. A brief conclusion summarizes our main findings and suggests directions for future research.

## I. Judicial Review: The Contemporary Debate

Although no explicit text in the U.S. Constitution grants the judiciary the power to strike down legislative or executive acts as unconstitutional, the power of judicial review was established early on, most famously by Chief Justice Marshall’s opinion in *Marbury v. Madison* [5 U.S. (1 Cranch) 837 (1803)].<sup>1</sup> Yet concerns about the legitimacy of judicial review have persisted from the earliest days of the Republic. These concerns intensified as federal courts began to wield their power more aggressively in the twentieth century. The political valence of the debate has changed over time (Friedman 2002; Chemerinsky 2004): In the 1920s and 1930s, progressives castigated the conservative Supreme Court for blocking progressive reforms and economic regulation (including key

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<sup>1</sup>Some revisionist historians, however, have questioned whether *Marbury* was really as significant in establishing strong judicial review as the conventional account would have it (Clinton 1989; Klarman 2001).

pieces of President Roosevelt’s New Deal), but beginning in the 1950s and 1960s, the political tenor changed, with conservative politicians complaining about liberal “judicial activism,” particularly in the areas of civil rights and criminal procedure. More recently, as the federal bench has become increasingly conservative, some progressives have rediscovered their skepticism of judicial review, arguing for greater judicial modesty, or in some cases wholesale reconsideration of the practice.

The debate about judicial review is not all about opportunistic politics, however. Many scholars and jurists have tried to take a longer and broader view. The scholars who did the most to frame the terms of the modern debate about judicial review are probably James Bradley Thayer and Alexander Bickel. Thayer (1893) was deeply skeptical about the legitimacy and wisdom of the strong-form judicial review that Chief Justice Marshall’s *Marbury* opinion has come to symbolize. Thayer argued that courts should strike down a legislative act only when the legislation in question is so clearly unconstitutional that no reasonable person could disagree. Otherwise, Thayer argued, the courts would be assuming legislative responsibilities. Writing almost 70 years later, Bickel (1962, pp. 16-17) nicely summed up what he famously described as the counter-majoritarian difficulty with judicial review: “[W]hen the Supreme Court declares unconstitutional a legislative act or the action of an elected executive, it thwarts the will of representatives of the actual people of the here and now; it exercises control, not in behalf of the prevailing majority, but against it.” In a polity that is otherwise organized as a representative democracy—and in a political culture that usually celebrates the virtues of majority rule—judicial review may therefore seem like a “deviant institution” (Bickel 1962, p. 18).<sup>2</sup>

Neo-Marshallian defenders of judicial review have advanced a variety of responses to the charge of counter-majoritarianism. One is to deny that majoritarianism is the only, or even a particularly important, normative consideration in assessing judicial review, and to assert moreover that the counter-majoritarian nature of judicial review is something to be celebrated rather than condemned.<sup>3</sup> A second response (in considerable tension with the first) denies that judicial review

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<sup>2</sup>Unlike Thayer, Bickel thought that there was room for courts legitimately to exercise their judgment in close cases, even against prevailing political majorities, but he thought courts should do so only occasionally, when such interventions were truly necessary.

<sup>3</sup>The most influential version of this argument asserts that judicial freedom from majoritarian constraints allows courts to serve as “forums of principle” that can promote important non-majoritarian values (Dworkin 1985; Brown 1998). Other scholars, influenced by social choice theory, have suggested that “majoritarianism” is often an incoherent

is in fact significantly counter-majoritarian in practice.<sup>4</sup> A third type of response—the one that we focus on in this paper—seeks to turn the tables on the critics by pointing out the systematic divergence between ideally-functioning democratic institutions and the real-world institutions we actually have. According to this line of argument, the elected branches are prone to systematic and predictable forms of “democratic failure”—defined here as a divergence between actual outcomes and the outcomes that would obtain if elected officials were perfect agents of the citizens—which appropriately-designed judicial review can correct or reduce. Thus judicial review, even if non-democratic when considered in isolation, can enhance rather than undermine the democratic performance of the political system overall.<sup>5</sup>

Neo-Marshallians have identified a wide variety of democratic failures that might justify judicial intervention. *First*, incumbent officials might use their power to entrench themselves, perhaps by interfering with rights of political speech or organization, or by manipulating electoral rules. Judicial review might be justified as a means for policing these anti-democratic “lock-ups” of the political process (Ely 1980; Issacharoff and Pildes 1998). *Second*, irrational prejudice might lead to the systematic exclusion of certain “discrete and insular minorities” from the ordinary process of legislative bargaining and coalition formation, which might in turn justify enhanced judicial scrutiny of government actions that burden those minorities (Ely 1980; Rogers 1999).<sup>6</sup> *Third*, parochial special interest groups might “capture” the government decision-making process, manipulating it to deliver rents at the expense of more diffuse majorities; judicial review may be a way to guard against this danger (Sunstein 1984, 1985; Chemerinsky 1989). *Fourth*, the government may exhibit

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normative baseline (Riker 1982; Shepsle 1992), and welfare economists remind us that the median voter’s ideal policy may diverge (sometimes substantially) from the policy that would maximize aggregate social welfare (Stiglitz 2000).

<sup>4</sup>This line of argument emphasizes that federal judges, though not directly elected, are appointed by elected officials and are embedded in a complex web of political relationships that ensure a reasonable degree of responsiveness to majoritarian preferences (Friedman 2009). Proponents of this view point to evidence suggesting that judicial decisions tend to track public opinion reasonably closely, at least when considered across a large number of cases over time (Dahl 1957; Barnum 1993; McGuire and Stimson 2004). There is also some evidence that even when courts strike down legislation, they often do so with the implicit blessing of current electoral majorities (Whittington 2005; Powe 2000; Tushnet 2006). A related but distinct argument as to why judicial review is not truly counter-majoritarian emphasizes that judicial rulings are rarely the last word on contested policy questions, but rather provoke subsequent debate among democratically elected representatives and the general public (Friedman 1993; Seidman 2001).

<sup>5</sup>This is a form of institutional “second-best” argument (Coram 1996; Vermeule 2003).

<sup>6</sup>The “discrete and insular minorities” terminology, as well as this approach to judicial review, grows out of a footnote in the Supreme Court’s 1938 decision in *United States v. Carolene Products Co.* [304 U.S. 144], which suggested that it might be appropriate for courts to review legislation that burdens discrete and insular minorities, such as religious or racial minorities, more aggressively than ordinary legislation.

a systematic bias in favor of too much legislation (either in general or in a particular domain), and the addition of a judicial veto that makes legislation more difficult or costly can therefore enhance majority welfare (Cross 2000; Fallon 2008; Rogers and Vanberg 2007). *Fifth*, short-term electoral pressures may induce political leaders to advocate policies that are temporarily popular, or that tend to burnish the incumbent leaders' reputation for competence, even when the leaders know that these policies are not in the long-term interest of the citizenry (Eisgruber 2001; Maskin and Tirole 2004). Counter-majoritarian judicial review might alleviate this problem by weeding out some of these misguided policies.

Scholars have reasonably questioned the existence and severity of these and other forms of democratic failure (e.g. Tushnet 1999; Ackerman 1985; Persily 2002). Even more importantly, neo-Thayerian critics of judicial review have pointed out that the existence of a democratic failure does not necessarily justify judicial review, any more than the existence of a market failure necessarily justifies government regulation: Even if the alleged democratic failures exist, judicial review might make things worse, not better (Elhauge 1991; Vermeule 2006; Waldron 2006). There are three principal reasons for this. The first concerns *judicial bias*: judges are more likely than elected politicians to have the “wrong” policy preferences, and may use their review power in ways that are adverse to most voters' interests. The second concern emphasizes *judicial incompetence*: even if judges are well-motivated, courts lack the capacity to evaluate the moral and empirical questions at stake in any hard case. This means that whatever benefits may flow from correct judicial decisions are likely to be outweighed by the costs of erroneous decisions. Third, following a concern raised by Thayer, some critics warn of a kind of *judicial overhang* (Tushnet 1999) or “moral hazard” (Vermeule 2006; Rogers 2009): judicial review may cause legislatures to pay less attention to certain issues (such as the impact of a proposed statute on constitutionally-protected values), because the legislators rely on the courts to address such concerns. If coupled with judicial bias or incompetence, this judicial overhang could make democratic failure problems worse.

So, we confront a difficult question: When will judicial review ameliorate democratic failure, and when will judicial review will exacerbate such failure? We develop a political economy framework

for addressing this question.<sup>7</sup> The scale and complexity of the topic mean that our contribution is necessarily limited. Perhaps most importantly, instead of considering the myriad forms of possible democratic failure, we focus on one particular type: the incentive that elections create for an incumbent politician to undertake bold policy gambles in order to appear competent, even when the politician suspects that the gamble is unwise. Also, although we explicitly incorporate the concern about judicial incompetence, and endogenously derive results related to judicial overhang, we do not incorporate the concern about judicial bias. Thus the agency problems in our analysis arise from sources other than preference divergence on the policy issue. We recognize that these limitations mean that our analysis omits several of the most important issues in debates over judicial review. Limiting our analysis in this way, however, allows us to focus on other important issues without the complexity and loss of clarity inherent in a “model of everything.”

## II. Democratic Failure without Judicial Review

### The Baseline Model

In the baseline model, there is a single Voter and a single elected Leader. The Leader must select one of two policies,  $a \in \{n, x\}$ , where  $a = n$  denotes a “normal” policy and  $a = x$  denotes an “extraordinary” policy. The policy that the Voter would prefer depends on the underlying state of the world,  $\omega \in \{n, x\}$ , where  $\omega = n$  denotes the “normal” state—that is, the state in which the Voter would prefer the normal policy—and  $\omega = x$  denotes an “extraordinary” state, in which the Voter would prefer the extraordinary policy. For simplicity, we assume the Voter receives a policy payoff of 1 if the policy matches the state ( $a = \omega$ ), and receives a policy payoff of 0 otherwise. The

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<sup>7</sup>Somewhat surprisingly, despite the vast legal literature on judicial review and the counter-majoritarian difficulty, relatively little political economy work engages this problem directly. Most democratic accountability models focus on the relationship between voters and one or more elected agents without judicial review (e.g. Austen-Smith and Banks 1989; Persson, Roland and Tabellini 1997), while most models of judicial review employ a separation-of-powers framework in which the accountability relationship with voters is suppressed (e.g. Ferejohn and Shipan 1990; Tsebelis 2002). Some important work compares decision-making by an elected official to decision-making by an unelected judge (Maskin and Tirole 2004; Komesar 1994), but the question whether one would want a judge *or* a politician to have authority over a given decision is distinct from the question whether one would want a judge to *review* a politician’s decision. Similarly, the literature considering why elected officials ever *comply* with the decisions of independent courts (e.g. Rogers 2001; Stephenson 2003) is focused on a different question than the one we address here. Some prior political economy work does focus on how judicial review might affect outcomes in a political agency framework (e.g. Rogers 1999, 2009; Rogers and Vanberg 2007; Posner 2008); our work is thematically closest to, and builds on, this strand in the literature.

prior probability of the normal state is  $p > \frac{1}{2}$ . This means (without loss of generality) that the Voter would prefer the normal policy *ex ante*.

The Leader’s information about the state depends on his type,  $t \in \{l, h\}$ , which we will refer to as his “ability” or “competence.” If the Leader is low-ability (or “incompetent”) ( $t = l$ ), then his information is no better than the Voter’s; such a Leader knows only the prior probability of the normal state ( $p$ ). The high-ability (or “competent”) Leader ( $t = h$ ), by contrast, learns the true state with certainty. The Leader knows his own ability, but the Voter knows only the prior probability  $q \in (0, 1)$  that the Leader is competent.

After the Leader selects the policy  $a$ , the Voter updates her assessment of the probability that the Leader is competent. Denote the Voter’s posterior estimate of this probability as  $\hat{q}(a)$ . This posterior belief can be thought of as the Leader’s *reputation*, with higher or lower values of  $\hat{q}$  indicating “better” or “worse” reputations, respectively. There is then an election in which the incumbent Leader faces some challenger.<sup>8</sup> All else equal, the Voter’s expected utility in future periods (which we do not model explicitly) is an increasing function of the competence of the winning candidate, so the Voter is more likely to reelect an incumbent with a good reputation. Thus, we assume that the probability the Leader wins the election is given by the function  $F(\hat{q})$ , where  $F$  is continuous and strictly increasing in  $\hat{q}$ .<sup>9</sup> We will refer to  $F(\hat{q})$  as the Leader’s *electoral strength*. The better the Leader’s reputation, the greater his electoral strength.

The Leader shares the Voter’s policy preferences; all else equal, the Leader prefers that the policy match the state ( $a = \omega$ ). The Leader, however, also receives a private benefit from holding office (e.g., ego rents, perks, or the ability to influence other policy issues). This private benefit, rather than a difference in policy preferences, creates the agency problem between the Voter and the Leader in our model.<sup>10</sup> Because the Leader cares about both policy and holding office, we write

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<sup>8</sup>We assume that the Voter does not acquire any additional information about the Leader’s competence prior to the election. The Voter does not, for example, observe whether the chosen policy was successful.

<sup>9</sup>One natural interpretation is that the challenger’s perceived quality, realized after the incumbent’s choice of  $a$ , is a random variable with cumulative distribution function  $F$ .

<sup>10</sup>We assume that the Leader’s interest in retaining office is independent of his ability. We recognize, however, that this assumption may be in tension with our assumption that the Leader shares the Voter’s policy preferences: If the Leader cares about good policy, then one could argue that a low-ability Leader ought to have a weaker interest in reelection than a high-ability Leader. While we acknowledge this possibility, we think it is substantively reasonable to suppose that even a politician who tries to advance the public welfare while in office cares just as intensely about reelection, no matter how competent the challenger appears.



his total utility as  $\alpha u + (1 - \alpha)$  if he wins reelection and as  $\alpha u$  otherwise, where  $\alpha \in [0, 1]$  is the weight that the Leader attaches to making the correct policy decision relative to getting reelected.

To summarize, the baseline model is as follows:

1. Nature determines the state of the world  $\omega$  and the Leader's underlying ability  $t$ .
2. *Policymaking Phase*: The Leader, knowing his ability, implements a policy  $a \in \{n, x\}$ .
3. *Election Phase*: The Voter draws an inference about the Leader's ability based on the Leader's strategy and action. An election is held, in which the Leader's probability of reelection is an increasing function of the probability the Voter assigns to the Leader being of high ability.

It may be useful to consider a stylized example that illustrates our model in a concrete setting. Suppose the Leader is the mayor of a small city who is considering what to do about an economically-depressed downtown area, and the Voter is the median voter in the local electorate. A private corporation has approached the mayor and expressed interest in acquiring some of the small residential parcels in the depressed area and using them to put up a new commercial facility. The firm requests that the city use its "eminent domain" power to seize the property in question, pay the legally-required compensation to the former owners, and transfer the property to the private firm so it can build its facility.

The median voter believes it is usually a bad idea for the government to use eminent domain to transfer property between private parties. That said, the median voter accepts that there are circumstances in which such takings would be appropriate, for example if holdout problems prevent efficient land assembly, or if there are significant positive externalities associated with the proposed new use of the property, or significant negative externalities associated with the current use of the property. But the median voter views these situations as rare. In this example, then, the "normal action" ( $a = n$ ) would be allowing the private real estate market to allocate the property without government intervention, while the "extraordinary action" ( $a = x$ ) would be for the city to use its eminent domain power to transfer the property from the current owners to the firm.

The mayor shares the median voter's views of when using eminent domain to effect private property transfers is appropriate. The mayor might, however, have better information as to whether

the market failures that would justify this sort of intervention are actually present. If the mayor (or his administration) is highly capable ( $t = h$ ), he will be able to correctly identify those extraordinary situations in which a government-mandated property transfer is in the public interest ( $\omega = x$ ), and will be able to confidently ascertain when such transfers are unjustified ( $\omega = n$ ). A low-ability mayor ( $t = l$ ), however, will not be able to distinguish these cases. The voters start out with some belief about the probability the mayor is competent ( $q$ ), but do not know for sure. The mayor's decision whether to invoke the eminent domain power will affect the voters' subsequent assessment of the mayor's competence ( $\hat{q}$ ), which in turn affects the mayor's ability to win reelection ( $F(\hat{q})$ ).

## Equilibrium

Our solution concept is Perfect Bayesian Equilibrium. We assume that the high-ability Leader always proposes the policy that matches the state.<sup>11</sup> Hence, to solve for an equilibrium, we solve for the low-ability Leader's equilibrium strategy and the Voter's equilibrium beliefs, where the low-ability Leader's strategy is a probability,  $\pi$ , of selecting the extraordinary policy,  $a = x$ . A strategy-belief pair is an *equilibrium* if (1) the low-ability Leader's policy choice (as prescribed by his strategy) maximizes his expected payoff given the Voter's beliefs, and (2) for each policy choice  $a$ , the Voter's posterior that the Leader is high-ability,  $\hat{q}(a)$ , is consistent with the Leader's strategy in the sense that it is derived via Bayes' Rule when possible. We now characterize equilibrium behavior in the game as follows:

**Proposition 1** (a) *In the absence of judicial review, the equilibrium probability that the low-ability Leader proposes the extraordinary action, denoted  $\pi_{norev}^*$ , has a uniquely defined value in the  $[0, 1 - p]$  interval.*

(b)  $\pi_{norev}^* = 0$  iff  $\frac{\alpha}{1-\alpha}(2p-1) \geq F(1) - F\left(\frac{pq}{pq+1-q}\right)$ ; otherwise,  $\pi_{norev}^* > 0$ .

(c)  $\pi_{norev}^*$  is weakly decreasing in  $\alpha$ , equaling  $(1-p)$  when  $\alpha = 0$ . The effect of  $q$  on  $\pi_{norev}^*$  is ambiguous, and depends on the shape of  $F$ .

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<sup>11</sup>This simplifies the exposition. We verify in the appendix that the high-ability Leader would always match the policy to the state in any reasonable equilibrium even if this assumption were relaxed.

We can interpret  $\pi_{norev}^*$  as a measure of “democratic failure.” In an ideally-functioning democracy, in which the Leader always acts as the Voter’s faithful agent, a high-ability Leader would match the action to the state, while a low-ability Leader would always select the normal action. In the equilibrium described in Proposition 1, the high-ability Leader behaves as he should, but the low-ability Leader may not. When  $\pi_{norev}^* > 0$ , the low-ability Leader’s electoral interests lead him sometimes to select the extraordinary action despite the absence of sufficient evidence that doing so is in the public interest—indeed, despite the fact that the Leader himself expects a lower policy payoff from the extraordinary action than from the normal action.<sup>12</sup> Thus,  $\pi_{norev}^*$  measures the degree to which the Leader’s private interest in reelection distorts his equilibrium behavior away from the behavior one would observe in an ideally-functioning representative democracy.<sup>13</sup>

We can illustrate the intuition for this result using our eminent domain example. Suppose the mayor always acts as the median voter’s faithful agent. If so, a competent mayor would use the government’s takings power to effect a property transfer if, but only if, doing so is justified by extraordinary circumstances (such as significant holdout problems or externalities), and an incompetent (but faithful) mayor would never engage in these sorts of transfers, because he lacks sufficient information to overcome the presumption that such transfers are undesirable. So, if the mayor always acts as a faithful agent, only a competent mayor would ever use the eminent domain

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<sup>12</sup>This baseline result is a variant on Levy’s (2004) analysis of “anti-herding” behavior by agents concerned with their reputation for competence (see also Trueman 1994; Prendergast and Stole 1996; Avery and Chevalier 1999). This anti-herding behavior is closely related to another form of democratic failure, usually characterized as “pandering,” in which a less-competent leader’s reputational interest causes him to select the policy the voters believe *ex ante* is more likely to be correct, even though the leader’s own information suggests otherwise (Canes-Wrone, Herron and Shotts 2001; Prat 2005; Prendergast 1993). The principal difference between these two classes of models concerns the quality of the less-competent leader’s information. In pandering models, even a less-competent leader gets a sufficiently reliable private signal that, but for electoral incentives, he would prefer to follow his signal. Furthermore, in these models the conditional probability that the low-ability leader gets the wrong signal, given the state, is equal (or nearly equal) for all states. These assumptions together mean that less-competent leaders disproportionately prefer the unpopular policy in the absence of electoral incentives. By contrast, in anti-herding models, the less-competent leader does not have sufficiently strong private information to alter his prior beliefs about which policy is more likely to be correct. Therefore, instead of being disproportionately likely to prefer the unpopular policy, less-competent leaders are (absent electoral incentives) disproportionately likely to prefer the popular policy. As should be clear from the comparison, the basic dynamic underlying both types of models is essentially the same: When less-competent leaders disproportionately prefer one (popular or unpopular) policy, they have an electoral incentive to choose the other (unpopular or popular) policy with positive probability, lest voters infer from the leader’s choice that he is not competent. We therefore expect that the analysis we develop in this paper would be similar in a model where democratic failure took the form of pandering, though we defer consideration of that case to future research.

<sup>13</sup> $\pi_{norev}^*$  is not, however, the probability that the final policy does not match the state. That probability,  $(1 - q)[p\pi_{norev}^* + (1 - p)(1 - \pi_{norev}^*)]$ , will be important in assessing the overall welfare consequences of judicial review.

power to transfer property to a private firm. That, in turn, means that voters who observe the mayor take this extraordinary action can infer with certainty that the mayor is competent. As a consequence, the electoral benefits to the mayor of using the eminent domain power this way are very high. Indeed, they might be so high that it is not rational for a low-ability mayor always to abstain from this use of the takings power: If the low-ability mayor deviates by executing the taking, his expected policy payoff will decrease (because he thinks this intervention is unlikely to be justified by market conditions), but his expected electoral payoff will increase (because the voters would incorrectly infer that he is competent); if the latter effect is stronger, the incompetent mayor cannot always act as a faithful agent in equilibrium. Instead, the incompetent mayor will use a mixed strategy, usually allowing the private real estate market to operate without government involvement, but sometimes (with probability  $\pi_{norev}^* > 0$ ) exercising the eminent domain power to transfer property, despite the absence of sufficient evidence that such extraordinary action is justified by extraordinary circumstances.

This sort of democratic failure hurts the Voter in two ways. First, and most obviously, absent additional information the extraordinary action has a negative expected policy payoff. Second, the distortion in the low-ability Leader’s behavior makes the electoral mechanism a less efficient means for the Voter to select a competent Leader, because the incumbent Leader’s action provides less information to the Voter about the Leader’s ability.<sup>14</sup> One solution to the former problem might be to eliminate the electoral constraint—say, by allowing the incumbent Leader to stay in office indefinitely, or imposing a term limit—or to keep the decision secret until after the election (Prat 2005; Fox 2007). Such approaches, however, would further undermine the capacity of the electoral system to improve the average competence of Leaders over time, and could have other adverse consequences as well. For these reasons, institutional designers might contemplate other mechanisms that preserve the system of selecting the Leader via competitive elections, but reduce or compensate for the democratic failure induced by the low-ability Leader’s electoral incentives. Judicial review may be one such mechanism.

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<sup>14</sup>To illustrate with an extreme case, if  $\pi_{norev}^*$  were equal to  $1 - p$ , then low-ability and high-ability Leaders would select  $a = x$  with equal probabilities, and the Voter would learn nothing at all about the Leader’s type.

### III. Democratic Failure with Judicial Review

#### The Modified Game

Now that we have isolated a particular form of democratic failure and understood its causes, we can analyze the impact of judicial review by modifying the baseline model as follows: After the Leader selects action  $a$ , this action is reviewed by a Judge before it is implemented. The Judge issues a decision  $d \in \{uphold, strike\}$ ; if the Judge upholds the Leader’s proposal ( $d = uphold$ ), the Leader’s proposed action is implemented, but if the Judge strikes down the Leader’s proposal ( $d = strike$ ), the Judge imposes the alternative policy as the final outcome (for instance, if  $a = x$  and  $d = strike$ , then the final policy is  $n$ ). Our analysis incorporates, in stylized fashion, three characteristics of judicial review that are often cited as important distinctions between judicial review and other forms of oversight or institutional control:

*First*, the Judge in our model has the power to strike down the Leader’s action, but cannot implement a more refined incentive scheme that offers variable payments or penalties to the Leader that depend on the Leader’s proposal. This is consistent with conventional understandings of the nature and limits of judicial power, and captures one of the ways that judicial review of government action is thought to differ from, for example, legislative oversight of a bureaucratic agency, or a firm’s supervision of its employees.<sup>15</sup>

*Second*, we assume the Judge is insulated both from popular elections and direct interference by the Leader, and that the Judge does not consider how her decisions will affect the election. The Judge in our model simply tries to get the correct answer in the case before her—that is, she tries to match the policy to the state. These assumptions are obviously simplifications. There is considerable evidence that real judges are sensitive to public opinion, care about their reputations, and are mindful of the political and electoral repercussions of their decisions (Gely and Spiller 1992; Schauer 2000; Friedman 2009). Nonetheless, these considerations probably matter much less to life-tenured, politically insulated judges than they do to elected politicians. We capture this *relative* difference in stylized form by stipulating that the Judge in our model cares *only* about

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<sup>15</sup>A strain in legal scholarship has challenged this assumption, arguing that judicial review can sometimes raise the costs of enacting certain government policies without necessarily prohibiting them. Our principal analysis brackets this possibility, but we consider it in an extension.

getting the policy decision right.

*Third*, we incorporate the neo-Thayerian concern about (relative) judicial incompetence by assuming that although the Judge’s analysis of a proposed government action conveys some decision-relevant information (i.e., information about the true state), the Judge’s information is worse than a competent Leader’s, and is never by itself strong enough to overcome the Judge’s prior belief that the state is normal. We model this by assuming that after the Leader proposes action  $a$ , the Judge gets a private signal  $s \in \{n, x\}$ ; the probability that this signal is accurate (i.e.,  $s = \omega$ ) is  $\gamma \in [\frac{1}{2}, p)$ .<sup>16</sup> The  $\gamma$  parameter, which is common knowledge, is a measure of the Judge’s “ability.” The assumption that  $\gamma < p$  guarantees that the Judge’s signal is never sufficient, on its own, to overcome the prior presumption that the normal action is correct. Unlike the Leader, who knows for sure whether he has received an accurate signal of the true state, the Judge knows only  $s$  and  $\gamma$ . Also, the Judge, like the Voter, does not know the Leader’s true type, but knows only the prior probability,  $q$ , that the Leader is competent.

We further assume, less realistically, that the Judge’s policy preferences are aligned with the Voter’s: the Judge receives a payoff of 1 if the policy matches the state, and a payoff of 0 otherwise. As we noted in Part II, the assumptions that both the Leader and the Judge share the Voter’s policy preferences admittedly rule out considerations that are central in other analyses of judicial review. Our model does not speak directly to arguments in favor of judicial review that emphasize the potential for bias or capture in the legislative process, nor to arguments against judicial review that emphasize judicial bias. We acknowledge these limitations, but we are principally interested in costs and benefits of judicial review that arise from other sources. By assuming that the Judge and the Leader, like the Voter, prefer that the policy match the state all else equal, we guarantee that the effects we identify are not due to differences in policy preferences.

To summarize, the modified game is as follows:

1. Nature determines the state of the world  $\omega$  and the Leader’s underlying ability  $t$ .
2. *Policymaking Phase*: The Leader, knowing his ability, proposes a policy  $a \in \{n, x\}$ .

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<sup>16</sup>We assume that the Judge’s signal is her private information. In an extension, we relax this assumption to consider how the results change if the Judge can publicly disclose her signal,  $s$ , in addition to issuing her decision,  $d$ .

3. *Judicial Review Phase*: The Judge, knowing the Leader’s policy proposal  $a$ , issues a decision  $d$ , either upholding or striking down the Leader’s proposal. If the Judge upholds the proposal, it is implemented; otherwise, the alternative policy is implemented.
4. *Election Phase*: The Voter draws an inference about the Leader’s ability based on the strategies and actions of the Leader and the Judge. An election is held, in which the Leader’s probability of reelection is an increasing function of the probability the Voter assigns to the Leader being of high ability.

## Equilibrium

We now characterize the equilibria of this game. As before, we assume the high-ability Leader always proposes the policy that matches the state ( $a = \omega$ ). We also assume that there is no judicial review if the Leader proposes the normal action. That is, only extraordinary proposals are “justiciable.” In our takings example, this assumption would mean that if the mayor decides to exercise the eminent domain power to transfer private property, a judge could potentially strike the taking down (for instance, on the grounds that the taking is not for a “public use” within the meaning of the Fifth Amendment of the U.S. Constitution), but if the mayor decides *not* to act, there is no mechanism by which a court could compel the mayor to use the eminent domain power to transfer the property.<sup>17</sup>

To solve for an equilibrium under these assumptions, we must solve for the probability that the low-ability Leader selects the extraordinary action, and for the behavior of the Judge upon observing that the Leader proposed such action. As before, we denote the low-ability Leader’s strategy by the probability  $\pi$  that he chooses the extraordinary action. We write the Judge’s strategy as  $\{\sigma_n, \sigma_x\}$ , where  $\sigma_n$  is the probability that the Judge upholds the extraordinary action even though her signal favors the normal action ( $s = n$ ), while  $\sigma_x$  is the probability that the Judge upholds the extraordinary action when her signal favors the extraordinary action ( $s = x$ ).

We must also specify beliefs. In contrast to the baseline model, the Voter’s beliefs about the Leader’s type may be affected by the Judge’s decision as well as the Leader’s action. Therefore, the

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<sup>17</sup>This assumption is often empirically plausible (as in our takings example) and simplifies the exposition. We show in the appendix that the assumption is benign, as the Judge never strikes down proposal  $a = n$  in equilibrium.

Voter’s posterior estimate of the probability that the Leader is competent is  $\hat{q}(a, d)$ , rather than simply  $\hat{q}(a)$ . The Judge’s belief that the state is normal, given the Leader’s proposal ( $a$ ) and the Judge’s signal ( $s$ ), is  $\hat{p}(a, s)$ .

The strategies of the low-ability Leader and the Judge, together with the beliefs of the Judge and the Voter, constitute an *equilibrium* if: (1) the low-ability Leader’s policy choice (as prescribed by his strategy) maximizes his expected payoff given the Judge’s strategy and the Voter’s posterior belief that the Leader is competent; (2) for each private signal  $s \in \{n, x\}$ , the Judge’s ruling (as prescribed by her strategy) maximizes her expected payoff given her posterior belief that the state is normal; and (3) the beliefs of the Voter and the Judge are derived via Bayes’ Rule whenever possible.<sup>18</sup>

Our equilibrium analysis proceeds in three stages. *First*, we characterize the equilibrium behavior of the Leader, taking the Judge’s strategy as exogenous. This partial-equilibrium analysis allows us to assess claims about the effect of aggressive judicial review on the probability of democratic failure. *Second*, we characterize the equilibrium behavior of the Judge, taking the Leader’s strategy as exogenous. This partial-equilibrium analysis clarifies the conditions under which the Judge will review the Leader’s action aggressively, and when the Judge will defer to the Leader’s decision. *Third*, we combine these partial-equilibrium analyses to fully characterize the equilibria of the judicial review game.

### **The Effect of the Judge’s Review Strategy on the Level of Democratic Failure**

One of the important questions in debates over judicial review, as discussed in Part I, is whether judicial review tends to increase or decrease democratic failure. While our model does not permit a comprehensive answer to that question, it enables us to ask how judicial review affects the likelihood of the particular type of democratic failure we isolated in Part II. We now consider that question, taking for the moment the Judge’s strategy as exogenous.

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<sup>18</sup>Since the high-ability Leader always matches policy to the state,  $x$  is always chosen with positive probability, so  $\hat{p}$  can be completely specified via Bayes’ Rule. In contrast, it is not always possible to completely specify  $\hat{q}$  via Bayes’ Rule. For example, if the Judge’s strategy calls for her always to uphold the Leader’s proposal of  $a = x$ , then  $\hat{q}(x, \textit{strike})$  cannot be derived via Bayes’ Rule. That said, the low-ability Leader’s incentives are fully determined by on-path beliefs, so the specification of off-path beliefs is inconsequential.



Most extant discussions of the effect of judicial review on democratic failure presume that the reviewing court makes some independent decision, based on the court's own analysis, about whether to uphold the proposed government action. In our model, this would imply a situation in which the Judge follows her signal, upholding the extraordinary policy if  $s = x$  but striking it down if  $s = n$  (i.e.,  $\sigma_n = 0$ ,  $\sigma_x = 1$ ). We label this form of judicial review as *active* review. There are two other pure strategies the Judge might employ, however. First, the Judge might adopt a *passive* approach, upholding the Leader's proposal regardless of the Judge's own signal (i.e.,  $\sigma_n = \sigma_x = 1$ ). Second, the Judge might employ a *strict* review strategy, striking down the extraordinary action in all cases (i.e.,  $\sigma_n = \sigma_x = 0$ ).<sup>19</sup> In what follows, we refer to any equilibrium in which the Judge employs an active review strategy as an *active equilibrium*. We define *passive equilibrium* and *strict equilibrium* analogously. The low-ability Leader's equilibrium strategy, conditional on the Judge adopting the active strategy, is denoted  $\pi_{act}^*$ , while  $\pi_{pass}^*$  and  $\pi_{strict}^*$  denote the Leader's equilibrium strategy given passive and strict review, respectively.<sup>20</sup>

We can now address the question whether judicial review increases or decreases democratic failure, taking the Judge's review strategy as exogenous:

- Proposition 2** (a) *Passive Review: In a passive equilibrium, the level of democratic failure is the same as in the baseline model without judicial review (i.e.,  $\pi_{pass}^* = \pi_{norev}^*$ ).*
- (b) *Strict Review: In a strict equilibrium, democratic failure is weakly greater than in the no review case (i.e.,  $\pi_{strict}^* = (1 - p) \geq \pi_{norev}^*$ ).*
- (c) *Active Review: In an active equilibrium, the level of democratic failure,  $\pi_{act}^*$ , is uniquely defined, but the ordering of  $\pi_{act}^*$  and  $\pi_{norev}^*$  is ambiguous. That is, active review may increase or decrease democratic failure, depending on the other parameters.*

Part (a) of Proposition 2 is unsurprising: If the Judge is passive, the model with judicial review is functionally equivalent to the baseline model with no review. Part (b) is also straightforward: If

<sup>19</sup>A fourth pure strategy, in which the Judge always does the opposite of what her signal indicates, is implausible and never occurs in equilibrium. There may also be mixed strategies, but we defer consideration of them until the next subsection.

<sup>20</sup>In the appendix, we show that, taking the Judge's strategy as exogenous,  $\pi^*$  is uniquely defined. Hence, the probabilities  $\pi_{act}^*$ ,  $\pi_{pass}^*$ , and  $\pi_{strict}^*$  are uniquely determined by the model's parameters.

the Judge uses a strict review strategy, the final outcome is always the normal policy; because that outcome is a foregone conclusion, the low-ability Leader's only incentive is to mimic the expected behavior of a high-ability Leader. Part (c) of Proposition 2—concerning the effect of active judicial review on a low-ability Leader's behavior—is more complicated, and also more relevant to debates over the effect of judicial review on democratic failure. The reason that active review may increase or decrease the level of democratic failure is that active review affects the low-ability Leader's incentives through two quite different channels, and these two effects may cut in opposite directions. One of these effects concerns the impact of active judicial review on the likely *policy consequences* if the low-ability Leader proposes the extraordinary action. The other effect concerns the impact of active judicial review on the likely *reputational consequences* for the low-ability Leader who proposes the extraordinary action. Let us consider each in turn.

First, the low-ability Leader's incentive to propose the extraordinary action depends in part on the expected policy consequences of making such a proposal. Because the extraordinary action is probably a bad idea, a low-ability Leader is more likely to propose such action if there is some probability the Judge will strike it down. This would be true even if the Judge struck down proposals at random; the fact that the Judge's signal is somewhat informative strengthens the effect. This “bailout effect” means that active judicial review tends to increase democratic failure all else equal (though it will also correct at least some instances of such failure). This observation is broadly consistent with the Thayerian concern about “judicial overhang”—the fear that judicial review will make elected leaders more reckless, because they can rely on the judiciary to screen out objectionable policies. It is also consistent with the related claim that elected officials are sometimes pleased—perhaps even relieved—when the courts strike down some policy measure that the enacting officials viewed as ill-advised, but felt pressured by electoral interests to propose (Salzberger 1993; Hirschl 2000). We can summarize this effect as follows:

**Remark 1 : Bailout Effect of Active Judicial Review** *Active review means that the outcome may be the normal policy even when the Leader proposes the extraordinary policy, and this tends to make the democratic failure more likely under active review than under no review, all else equal.*

Active review has also a second effect, however, that neo-Thayerians (and others) tend to

overlook: As long as the Judge’s signal is somewhat informative, active review communicates useful information to the Voter about the true state, which the Voter can use to update her assessment of the Leader’s competence. Call this the “legitimation effect” of active judicial review.<sup>21</sup> This effect means that the low-ability Leader’s expected reputational benefit from proposing the extraordinary action is smaller with active review than in the no review case: Although judicial validation of the Leader’s proposal has a positive effect on his reputation, judicial rejection has an adverse reputational effect. Moreover, since the low-ability Leader’s conditional probability of being overruled if he proposes  $a = x$  is greater than that of the high-ability Leader, the low-ability Leader’s expected reputation from proposing  $a = x$  in the presence of active judicial review is less than that from doing so in the absence of such review.<sup>22</sup> One might conclude from this that the legitimation effect of active judicial review tends to decrease democratic failure. That is often true, but not always. Whether the legitimation effect increases or decreases democratic failure depends on the functional relationship between reputation and electoral strength,  $F(\hat{q})$ , as follows:

**Remark 2 : Legitimation Effect of Active Judicial Review** *Suppose the probability the Leader proposes  $a = x$  is the same with active review as it is without review. Then, compared to the no review case, being upheld enhances the Leader’s reputation and being overruled damages the Leader’s reputation. Moreover, the low-ability Leader’s expected reputation is always lower with judicial review than without. The impact of this effect on democratic failure depends on the electoral strength function:*

- (a) *A sufficient (but not necessary) condition for the legitimation effect to dampen the low-ability Leader’s electoral incentive to propose the extraordinary action is that  $F(\hat{q})$  is weakly concave (i.e., improvements in the Leader’s reputation increase his electoral strength at a weakly decreasing marginal rate).*

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<sup>21</sup>While there is little empirical evidence directly on the question of how judicial validation or invalidation of a policy affects public opinion of the officials who enacted it, there is evidence that, at least under certain conditions, judicial rulings affect public evaluations of the policies themselves (Hoekstra and Segal 1996; Clawson, Kegler and Waltenburg 2001), though the significance of this effect has been questioned (Baas and Thomas 1984; Marshall 1989). If such an effect does sometimes exist, it is suggestive evidence for the sort of legitimation effect we derive here.

<sup>22</sup>This is similar to the effect of informative media reports on politicians’ incentive to pander, as discussed in Ashworth and Shotts (2008). A crucial difference, however, is that the media in their model *only* communicates a signal about the state, whereas in our model the Judge’s decision *simultaneously* communicates information about the state *and* affects the policy outcome directly. This difference reflects an important substantive difference between the media and the judiciary as constraints on elected officials.

(b) *If, however,  $F(\hat{q})$  is sufficiently convex over certain ranges, then it is possible that the legitimation effect increases the low-ability Leader’s electoral incentive to propose  $a = x$ .*

To understand why the legitimation effect of active judicial review may sometimes (counter-intuitively) increase democratic failure, consider the following example. Suppose that if there were no judicial review, the Leader’s reputation would improve if he took the extraordinary action, but this reputational improvement would translate into only a modest increase in electoral strength because the slope of the  $F$  function is very shallow between  $q$  and  $\hat{q}(x)$ . But, a slightly greater improvement in the Leader’s reputation would translate into a substantial increase in electoral strength because of a significant convexity in  $F$  between  $\hat{q}(x)$  and  $\hat{q}(x, uphold)$ , while even a substantial blow to the Leader’s reputation would not have much impact on his electoral strength because the slope of  $F$  between  $\hat{q}(x, strike)$  and  $\hat{q}(x)$  is shallow. In this case, although the incompetent Leader’s expected *reputation* is worse under active judicial review, his expected *electoral strength* is greater. This scenario might occur, for example, if the incumbent anticipates a very high-quality challenger, and can realistically hope for reelection only if he both proposes extraordinary measures and has his proposal validated by an independent court. While this is a possibility, we suspect that the legitimation effect of active review usually tends to reduce democratic failure. The significant convexities at precise points in the electoral strength function that are required to produce the opposite effect strike us as substantively implausible in most cases.

Putting the bailout and legitimation effects together, we can elaborate on part (c) of Proposition 2 to fully characterize the “judicial overhang” effect of active review as follows:

**Remark 3 : Net Effect of Judicial Overhang on Democratic Failure**

- (a) *The policy consequences of active judicial review (the “bailout effect”) tend to increase democratic failure relative to the no review baseline.*
- (b) *If, due to a strictly convex electoral strength function, the reputational consequences of active judicial review (the “legitimation effect”) also tend to increase democratic failure, then active review unambiguously increases democratic failure relative to the no review baseline.*

(c) *If, however, the legitimization effect of active review tends to decrease democratic failure, the bailout and legitimization effects cut in opposite directions, and the aggregate effect of active review on democratic failure can be positive or negative, depending on the other parameters.*

(i) *When the Leader attaches relatively more weight to policy ( $\alpha$  high), the bailout effect is stronger relative to the legitimization effect. This makes active review more likely to increase  $\pi_{act}^*$  (unless  $F$  is so sharply convex that the legitimization effect exacerbates democratic failure more than the bailout effect does).*

(ii) *The effect of the Judge's ability ( $\gamma$ ) on  $\pi_{act}^*$  is ambiguous, as increases in  $\gamma$  strengthen both the bailout effect and the legitimization effect, and the impact of a change in  $\gamma$  on the legitimization effect depends on  $F$ .*

(iii) *The effect of changes in the probability of a competent Leader ( $q$ ) on  $\pi_{act}^*$  is ambiguous and depends on  $F$ . That said, for very high and very low values of  $q$ , the posterior  $\hat{q}$  is likely to be very close to  $q$  with or without judicial review. In other words, when the Voter is sufficiently confident in her ex ante assessment of the Leader's ability, the incompetent Leader can do little to change that assessment. This means that unless  $F$  is very steep in those parameter ranges (such that even very small differences in reputation have substantial electoral effects), the legitimization effect is likely to be smaller for extreme values of  $q$ , and larger for intermediate values of  $q$ , all else equal.*

We conclude this subsection by noting that our discussion so far has considered only the impact of judicial review on the *incidence* of democratic failure, not its potential to *correct* democratic failure (as when the Judge strikes down a low-ability Leader's incorrect decision) nor its potential to obstruct desirable government initiatives (as when the Judge incorrectly strikes down an extraordinary proposal).<sup>23</sup> We take up these factors, in conjunction with the effect of review on the frequency of democratic failure, in Part IV.

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<sup>23</sup>Formally, under active review the probability that the Leader incorrectly *proposes* extraordinary action in the normal state is  $p(1 - q)\pi_{act}^*$ ; the probability that the extraordinary policy is incorrectly *implemented* is  $(1 - \gamma)p(1 - q)\pi_{act}^*$ ; and the probability that the active Judge incorrectly strikes down an extraordinary policy in the extraordinary state is  $(1 - \gamma)(1 - p)(q + (1 - q)\pi_{act}^*)$ .

## The Effect of the Level of Democratic Failure on the Judge's Review Strategy

The preceding subsection characterized the behavior of the Leader, taking the Judge's review strategy as fixed. But the Judge in our model is also a strategic actor. We now investigate the conditions that give rise to different forms of judicial behavior, temporarily treating the level of democratic failure ( $\pi^*$ ) as exogenous. Doing so allows us to characterize the Judge's optimal review strategy as follows:

**Proposition 3** *Define the following two threshold values:*

$$\underline{T} \equiv \left( \frac{q(1-p)}{1-q} \right) \frac{(1-\gamma)}{p-(1-\gamma)}$$

and

$$\overline{T} \equiv \left( \frac{q(1-p)}{1-q} \right) \frac{\gamma}{p-\gamma}.$$

*In an equilibrium in which the low-ability Leader selects the extraordinary action with probability  $\pi^*$ , the Judge's equilibrium strategy takes one of five forms—passive, active, strict, semi-strict, or semi-active—as follows:*

- (a) *If  $\pi^* < \underline{T}$ , the Judge adopts the passive review strategy, upholding the Leader's proposal of  $a = x$  even if the Judge's signal is  $s = n$  ( $\sigma_x^* = \sigma_n^* = 1$ ).*
- (b) *If  $\pi^* > \overline{T}$ , the Judge adopts the strict review strategy, striking down a proposal of  $a = x$  even if the Judge's signal is  $s = x$  ( $\sigma_x^* = \sigma_n^* = 0$ ).*
- (c) *If  $\pi^* \in (\underline{T}, \overline{T})$ , then the Judge adopts the active review strategy, upholding the Leader's proposal of  $a = x$  if  $s = x$ , but striking it down if  $s = n$  ( $\sigma_x^* = 1; \sigma_n^* = 0$ ).*
- (d) *If  $\pi^* = \underline{T}$ , the Judge adopts either the passive strategy, the active strategy, or a semi-active strategy in which the Judge always upholds the extraordinary action if  $s = x$  ( $\sigma_x^* = 1$ ) and upholds it with probability  $\sigma_n^* \in (0, 1)$  if  $s = n$ .*
- (e) *If  $\pi^* = \overline{T}$ , the judge adopts either the active strategy, the strict strategy, or a semi-strict strategy in which the Judge always strikes down the extraordinary action if  $s = n$  ( $\sigma_n^* = 0$ ).*

and upholds it with probability  $\sigma_x^* \in (0, 1)$  if  $s = x$ .

The threshold values  $\underline{T}$  and  $\overline{T}$  partition the  $[0, 1]$  interval into (at most) three regions: the  $[0, \underline{T}]$  interval; the  $[\underline{T}, \overline{T}]$  interval; and, if  $\overline{T} \leq 1$ , the  $[\overline{T}, 1]$  interval.<sup>24</sup> The postulated rate of democratic failure  $\pi^*$  will fall into one of these regions, or will fall exactly on one of the boundary points ( $\underline{T}$  or  $\overline{T}$ ). Proposition 3 establishes that the Judge's optimal review strategy depends on the region into which  $\pi^*$  falls: if  $\pi^*$  is sufficiently low—if it lies below  $\underline{T}$ —the Judge prefers passive review; if  $\pi^*$  is sufficiently high—if it exceeds  $\overline{T}$ —the Judge prefers strict review; if  $\pi^*$  falls in the middle range—between  $\underline{T}$  and  $\overline{T}$ —the Judge prefers active review. Thus,  $\underline{T}$  is the value of  $\pi^*$  at which the Judge is indifferent between passive and active review, while  $\overline{T}$  is the value of  $\pi^*$  at which the Judge is indifferent between active and strict review. If  $\pi^*$  falls exactly on one of these indifference points, the Judge may adopt a mixed strategy as described in parts (d) and (e) of Proposition 3.

In interpreting this result, it is helpful to recall that the Judge (who cares only about making the correct policy choice) has three useful pieces of information at her disposal when she must issue her decision. *First*, she knows the prior probability of the normal state,  $p > \frac{1}{2}$ . *Second*, she knows that the Leader proposed the extraordinary policy, which implies either that the Leader was competent and observed the extraordinary state, or that the Leader was incompetent but proposed the extraordinary action anyway (which he does with probability  $\pi^*$ ). *Third*, the Judge observes her own signal,  $s$ . The Judge uses her own signal and the Leader's action to form an updated belief about the probability that the state is normal,  $\hat{p}$ . If  $\hat{p} > \frac{1}{2}$ , the Judge prefers to strike down the extraordinary action; if  $\hat{p} < \frac{1}{2}$ , the Judge prefers to uphold the extraordinary action; if  $\hat{p} = \frac{1}{2}$ , the Judge is indifferent.

The fact the Leader proposed the extraordinary action tends to increase the Judge's estimate of the probability that such action is indeed correct, but the strength of the inference the Judge can draw from the Leader's extraordinary proposal is inversely proportional to the level of democratic failure,  $\pi^*$ . If  $\pi^*$  is low enough—if it is less than  $\underline{T}$ —then the Judge can draw a sufficiently strong inference from the Leader's proposal of  $a = x$  that even if the Judge's own signal is  $s = n$ , the

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<sup>24</sup>Note that the definitions of  $\underline{T}$  and  $\overline{T}$  guarantee that  $\overline{T} > \underline{T} > 0$ , but  $\overline{T}$  may be greater or less than 1, depending on the other parameters.

Judge's posterior  $\hat{p}$  is still less than  $\frac{1}{2}$ . In other words, if the Leader's behavior is sufficiently close to that of a faithful agent, the information contained in the Leader's proposal of extraordinary action is greater than the information contained in the prior and the Judge's signal combined. If  $\pi^*$  falls into this range, then, the judge rationally defers to the Leader's decision.

If, on the other hand,  $\pi^*$  is sufficiently high—greater than  $\bar{T}$ —the inferences that the Judge can draw from the Leader's proposal of  $a = x$ , even when combined with a judicial signal of  $s = x$ , are too weak to overcome the Judge's prior belief that the normal action is correct. Recall that the Judge's signal is never strong enough to overcome the prior, so the Judge would not be willing to uphold an extraordinary proposal without some additional piece of reliable information. This additional information would have to be the information contained in the fact that the Leader made the extraordinary proposal. But if the likelihood of democratic failure is high, the Leader's proposal contains very little information, because low-ability Leaders frequently propose extraordinary action. So, for a sufficiently high  $\pi^*$ , the Judge always strikes down the extraordinary proposal.

Perhaps most interesting is the intermediate case, in which  $\pi^*$  lies between  $\underline{T}$  and  $\bar{T}$ . In this case, the information contained in the prior (which tends to favor the normal state) and the information contained in the Leader's extraordinary proposal (which tends to favor the extraordinary state) offset sufficiently that the Judge's own signal becomes decisive. Thus, the Judge uses her signal only when it is rational for her to do so—when her signal, though weak, is determinative in light of the fact that the other pieces of information at her disposal cut in opposite directions.

Although we defer a comprehensive consideration of the welfare effects of judicial review until Part IV, the preceding observations imply one welfare implication that is sufficiently important (both substantively and for developing intuition) that we state it here:

**Remark 4 : Rational Judicial Activism** *The Judge follows her signal only when doing so improves her expected policy payoff, which is identical to the Voter's expected policy payoff. Thus, if democratic failure ( $\pi^*$ ) is fixed, judicial review weakly improves Voter welfare relative to the baseline no review case.*

This result is notable in light of a familiar neo-Thayerian objection to judicial review that emphasizes the relative incompetence of judges in evaluating the uncertain empirical and moral



questions at stake in hard cases. Translated into the language of our model, this criticism implies that  $\gamma$  is low relative to  $q$ . One might think that for sufficiently low values of  $\gamma$ , introducing judicial review would harm Voter welfare, because ignorant Judges would strike down policies adopted by more competent elected Leaders. Our analysis, however, demonstrates that low judicial ability is not a sufficient condition for judicial review to have adverse effects on Voter welfare. The reason is that in our model the Judge, like Socrates, is aware of the limits of her knowledge, and she rationally discounts the inferences she draws from her own signal accordingly. The Judge relies on her own signal if, but only if, that signal is reliable enough, in light of the other conflicting pieces of information, to tip the balance in favor of one policy or the other. If the Judge’s ability is sufficiently low, she would defer to the Leader, making judicial review irrelevant but not harmful.<sup>25</sup>

The preceding discussion shows how the Judge’s optimal review strategy depends on the relationship of  $\pi^*$  to  $\underline{T}$  and  $\overline{T}$ . We may also be interested in comparative statics on the the  $[\underline{T}, \overline{T}]$  interval, as changes in this interval can affect the Judge’s review strategy, even holding  $\pi^*$  constant. These comparative statics are as follows:

**Remark 5 : Impact of Leader and Judge Characteristics on Judicial Strategy**

(a) *The lower threshold  $\underline{T}$  is decreasing in  $\gamma$ , while the upper threshold  $\overline{T}$  is increasing in  $\gamma$ . Thus, as the ability of the Judge increases, the  $[\underline{T}, \overline{T}]$  interval expands.*

(b)  *$\underline{T}$  and  $\overline{T}$  are independent of  $\alpha$ .*

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<sup>25</sup>Although the “judicial incompetence” criticism usually emphasizes that judges lack *information* and/or *expertise* (i.e., that their signals are inaccurate), some have hypothesized that judges may also exhibit systematically *irrational* behavior—for example, overconfidence in their own signals. The most prominent such hypothesis maintains that judges will be swayed excessively by the facts and circumstances of the cases before them (Schauer 2006; Vermeule 2009). In our setting, this sort of consideration would not matter, given that both the Judge and the Leader are evaluating a specific action, rather than making a general rule. That said, we acknowledge the possibility that judicial incompetence may lead to worse outcomes in the presence of this or other forms of judicial irrationality, even if the judge is unbiased. Thus, the arguments of some neo-Thayerians might be interpreted as a call for real-world judges to behave more like the fully-rational Judge in our model. The extant literature, however, is not always clear in sharply distinguishing arguments about why judges are less *informed* than are other political actors from arguments about why judges are systematically less *rational* than other actors. Many (though not all) of the structural and institutional arguments offered to support the former claim do not suffice to establish the latter claim. As for the specific argument that judges will exhibit irrational behavior because of the undue salience they attach to the specific cases before them, this is a possibility, but it is not clear how strong the effect actually is relative to potentially countervailing considerations, such as the additional information contained in a particular case or a series of cases (Rogers 2001; Sherwin 2006), and the analogous tendency of elected officials to overreact to salient events with ill-considered legislation or regulations (McGinnis and Mulaney 2008; Kuran and Sunstein 1999).

(c) The thresholds  $\underline{T}$  and  $\overline{T}$  are both increasing in  $q$ . Thus, as the probability of a competent Leader increases, the  $[\underline{T}, \overline{T}]$  interval shifts upward. The effect of a change in  $q$  on the size of this interval is ambiguous, and depends on the other parameters.

The intuition for part (a) is straightforward: The better the Judge’s signal, the larger the range of parameter values for which the Judge would be willing to follow it (that is, to use an active review strategy, rather than a passive or strict strategy). Part (b) follows from the fact that the Judge’s strategy is not directly affected by the Leader’s utility function. To see the intuition for part (c), it is helpful to recall that when the probability of a competent Leader ( $q$ ) increases, holding  $\pi^*$  fixed, the Judge can draw a stronger inference about the state from the Leader’s proposal of extraordinary action. This makes the passive strategy more attractive relative to the active strategy (i.e.,  $\underline{T}$  shifts up), and makes the active strategy more attractive relative to the strict strategy (i.e.,  $\overline{T}$  shifts up). Also, while the effect of an increase in  $q$  on the size of the  $[\underline{T}, \overline{T}]$  interval is ambiguous, if  $\overline{T} > 1$  then increases in  $q$  unambiguously decrease the range of parameter values that can sustain an active equilibrium, because no strict equilibrium exists in this case.

### Equilibria of the Judicial Review Game

Thus far we have used partial-equilibrium analysis to derive the level of democratic failure given an exogenous judicial review strategy (Proposition 2) and the Judge’s optimal review strategy given a fixed level of democratic failure (Proposition 3). The former partial-equilibrium analysis showed that active judicial review may increase or decrease democratic failure, compared to the no review baseline, depending on the relative strength of the bailout and legitimation effects. The latter partial-equilibrium analysis showed that active review is optimal for the Judge only for intermediate levels of democratic failure (in the  $[\underline{T}, \overline{T}]$  interval); lower or higher levels of democratic failure induce passive or strict review, respectively. We can combine these partial equilibrium results to fully characterize the existence conditions for the equilibria of the game, as follows:

**Proposition 4**  $\pi_{act}^*$  and  $\pi_{pass}^*$  are defined as in Proposition 2, and  $\underline{T}$  and  $\overline{T}$  are defined as in Proposition 3. Equilibria always exist, and always take one of five forms—passive, strict, active, semi-strict, or semi-active—as follows:

- (a) A passive equilibrium exists if and only if  $\pi_{pass}^* \leq \underline{T}$ .
- (b) An active equilibrium exists if and only if  $\pi_{act}^* \in [\underline{T}, \overline{T}]$ .
- (c) A strict equilibrium exists if and only if  $(1 - p) \geq \overline{T}$ .
- (d) A semi-active equilibrium exists if and only if there is some  $\sigma_n \in (0, 1)$  such that, if  $\sigma_x = 1$  and  $\pi = \underline{T}$ , the low-ability Leader is indifferent between  $a = n$  and  $a = x$ .
- (e) A semi-strict equilibrium exists if and only if there is some  $\sigma_x \in (0, 1)$  such that, if  $\sigma_n = 0$  and  $\pi = \overline{T}$ , the low-ability Leader is indifferent between  $a = n$  and  $a = x$ .

One possibility, not ruled out by Proposition 4, is that equilibria in which the Judge plays a pure strategy may not exist; if not, the Judge's behavior will be characterized by a mixed strategy (semi-active or semi-strict). In considering how this may occur, let us temporarily ignore strict or semi-strict equilibria, focusing instead on the Judge's choice between passive and active review.<sup>26</sup> Suppose  $\pi_{pass}^* > \underline{T} > \pi_{act}^*$ . In this case, there is no passive or active equilibrium; there is only a semi-active equilibrium, with a democratic failure level of  $\pi^* = \underline{T}$ . We can illustrate the point using the eminent domain example. Suppose that if the reviewing court were to scrutinize proposed takings closely, striking down those the court found unjustified, the low-ability mayor would be less likely to propose such takings because of the adverse reputational consequences of judicial invalidation. Suppose further that if the mayor were as cautious as he would be if the court adopted an active review posture, the level of democratic failure would be sufficiently low that the court would always prefer to defer to the mayor's judgment, rather than follow its own fallible analysis of market conditions—that is, the court would prefer the passive strategy. On the other hand, if the mayor were as reckless as he would be if the court were passive, democratic failure would be frequent enough that the court would scrutinize proposed takings closely, rather than simply deferring. The only sustainable equilibrium here is the semi-active equilibrium, in which the court defers to the agency's proposal sometimes—and at random—but follows its own analysis in other cases. This result, and the existence of mixed strategy equilibria more generally, suggests an

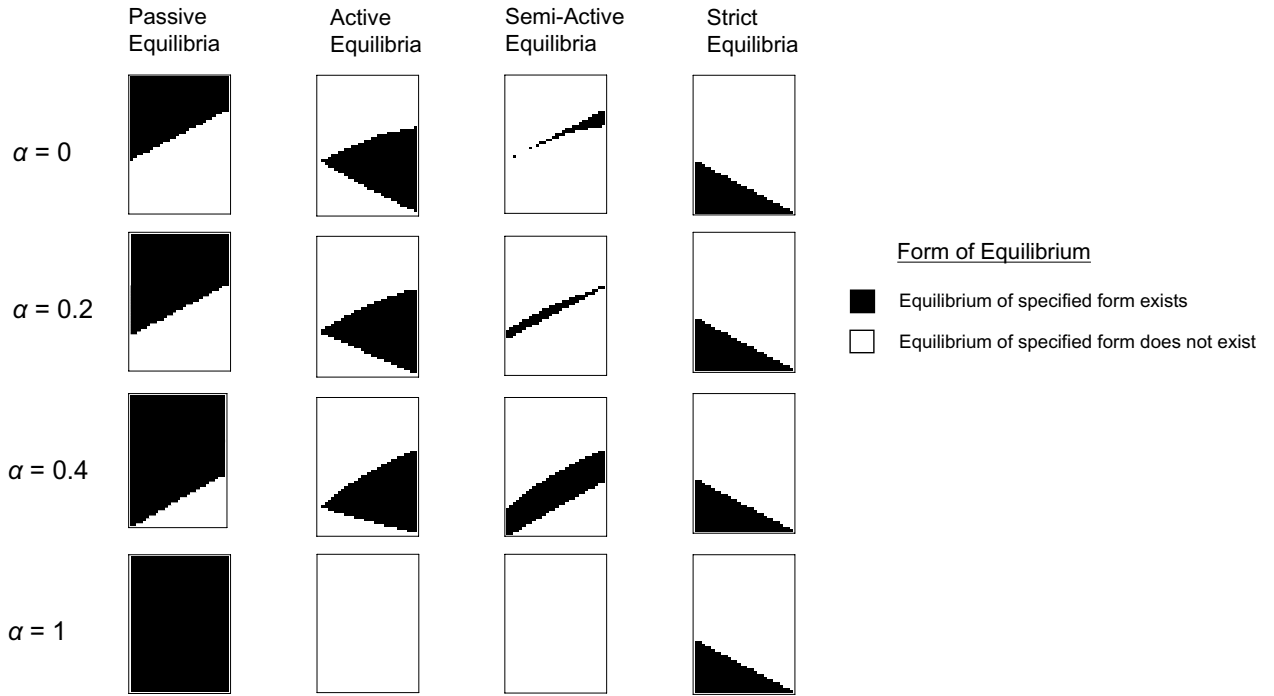
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<sup>26</sup>Provided that  $F$  is concave, if  $(1 - p) < \overline{T}$ , then neither strict nor semi-strict equilibria exist.

alternative interpretation of the observation—often framed as a criticism—that judicial behavior in some domains is “unpredictable” (e.g. Tushnet 1979; Rose-Ackerman 1988; Pildes and Niemi 1993). The mixed strategy equilibria identified in Proposition 4 involve “unpredictable” judicial decision-making, in that the Judge randomizes between two pure strategies. Yet this unpredictability is a consequence of equilibrium behavior. Thus our model shows how legal unpredictability can arise endogenously, as a product of instrumentally rational behavior, even when judges have the “correct” policy preferences.

Another interesting possibility, not ruled out by Proposition 4, is that for some parameters, more than one type of judicial review behavior is sustainable in equilibrium. We can again illustrate in the context of our takings example. Suppose that active judicial review would substantially increase the likelihood that an incompetent mayor would propose taking and transferring private property, because the bailout effect—the degree to which judicial review rescues the mayor from the consequences of an ill-advised taking—is sufficiently large. If so, it is possible that  $\pi_{act}^* > \underline{T} > \pi_{pass}^*$ . In this case, if the court would defer to the mayor’s decision, the level of democratic failure will be sufficiently low that it is optimal for the court to defer. But if the court scrutinizes a proposed taking aggressively, the level of democratic failure will be sufficiently high that it is optimal for the court to engage in this sort of aggressive scrutiny. Thus passive review and low levels of democratic failure are mutually-reinforcing, while active review and high levels of democratic failure are also mutually-reinforcing. The outcome thus depends on the equilibrium selection rule, which lies outside the predictive scope of the model (and which may be thought of as an aspect—perhaps a manipulable aspect—of “legal culture”).

We can also use Proposition 4, in conjunction with Propositions 2 and 3, to show how the other parameters of the model—particularly the Judge’s ability ( $\gamma$ ), the expected quality of the Leader ( $q$ ), and the Leader’s relative concern about policy ( $\alpha$ )—affect the existence of various types of equilibria. The most important observation here is that changes in the parameters can affect the threshold values  $\underline{T}$  and  $\bar{T}$  (which determine the Judge’s optimal strategy conditional on the level of democratic failure) *and* the level of democratic failure associated with a given review strategy. Deriving comparative statics for these parameters must therefore involve both a consideration of



All simulations fix  $F(\hat{q}) = \hat{q}$  and  $p = .8$ .  
 $\gamma$  varies along the horizontal axis of each graph from .5 to .8.  
 $q$  varies along the vertical axis of each graph from 0 to 1.

Figure 1: Effect of Parameter Values on Judge's Equilibrium Review Strategy.

how a parameter change may change the equilibrium (say, from a passive to an active equilibrium), and how this parameter change affects the level of democratic failure given the equilibrium selected.

This complexity, as well as the fact that even in the partial-equilibrium analyses many of the comparative static effects are ambiguous and contingent, makes it difficult to present interpretable comparative statics in analytic form. We therefore rely principally on computational methods to illustrate salient findings regarding how variation in the model parameters affects the desirability of judicial review. Figure 1 presents the results of one such computational analysis, in which we assume a linear electoral strength function ( $F(\hat{q}) = \hat{q}$ ), set the prior probability of the normal

state at  $p = 0.8$ , and vary  $\alpha$ ,  $q$ , and  $\gamma$ . Each row of Figure 1 characterizes the effects of changes in  $q$  and  $\gamma$ , holding  $\alpha$  fixed. The  $\alpha$  value varies by row; as one moves from the top to the bottom row of Figure 1, one moves from the case in which the Leader cares only about her electoral fortunes ( $\alpha = 0$ ) to the case in which the Leader cares only about policy outcomes ( $\alpha = 1$ ). The columns of Figure 1 identify the equilibria that exist for the specified parameter values. Thus, the first column characterizes the values of  $\alpha$ ,  $q$ , and  $\gamma$  for which passive equilibria exist, whereas the second, third, and fourth columns do the same for active, semi-active, and strict equilibria, respectively.<sup>27</sup>

Inspection of Figure 1 reveals, first, that non-passive equilibria exist if the probability of a competent Leader ( $q$ ) is not too large, and, second, that increasing the accuracy of the Judge's signal ( $\gamma$ ) favors the existence of active equilibria. Furthermore, as the relative weight the Leader attaches to policy ( $\alpha$ ) increases, it becomes easier to sustain passive equilibria (because as  $\alpha$  increases,  $\pi_{pass}^*$  decreases, making it more likely that  $\pi_{pass}^* < \underline{T}$ ), but  $\alpha$  has no effect on the existence of strict equilibria (because policy considerations have no effect on the Leader's incentives when the Judge would always overrule an extraordinary proposal) and an ambiguous effect on the existence of active equilibria. These results are intuitive, and consistent with Remark 5.

## IV. Welfare Consequences of Judicial Review

We now consider the effect of judicial review on Voter welfare. In our setup, judicial review may affect Voter welfare through two distinct channels: *First*, judicial review affects the probability that the policy matches the state, which affects the Voter's *current* policy payoff. *Second*, judicial review affects the Voter's information regarding the incumbent Leader's type, which in turn affects the efficacy of the election as a device for selecting competent leaders; through this channel, judicial review may affect the Voter's *future* policy payoffs. We consider each effect in turn, remaining agnostic as to their relative importance.

Consider first the effect of judicial review on the probability that the policy issue in the current period will be decided correctly. This turns out to be a bit involved, but we can summarize the

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<sup>27</sup>Semi-strict equilibria are unimportant when  $F(\hat{q}) = \hat{q}$ , as they only exist when strict equilibria exist, and they deliver the same policy payoff to the Voter as a strict equilibrium.

general conditions under which judicial review will have a positive, negative, or no effect on the Voter's current-period policy payoff as follows:

**Proposition 5** (a) *If judicial review induces a passive equilibrium, judicial review has no effect on Voter welfare. Thus, a necessary condition for judicial review to affect Voter welfare is for judicial review to induce a non-passive equilibrium.*

(b) *If judicial review induces a non-passive equilibrium in which democratic failure is (weakly) lower than in the no review case, then judicial review (weakly) improves the Voter's expected current-period policy payoff.*

(c) *If judicial review induces a non-passive equilibrium in which democratic failure is strictly greater than in the no review case, then judicial review may increase or decrease the Voter's expected current-period policy payoff.*

Part (a) of Proposition 5 is straightforward: In a passive equilibrium, behavior is identical to the no review case, so judicial review has no welfare effect. To understand parts (b) and (c), it is helpful to recall, first, that non-passive review always increases Voter welfare if the level of democratic failure is held constant (see Remark 4), and, second, that if judicial review induces a non-passive equilibrium, democratic failure may increase or decrease depending on the parameter values (see Remark 3). Thus, non-passive judicial review has two distinct effects on the Voter's expected policy payoff: *first*, judicial review will change the *probability* that the Leader will erroneously propose the extraordinary action in the normal state; *second*, judicial review will *correct* some of these erroneous decisions by striking them down.<sup>28</sup> If judicial review *decreases* democratic failure, both of these effects cut in the same direction, leading to an unambiguous increase in the Voter's expected policy payoff (Proposition 5(b)). If, however, judicial review *increases* democratic failure (Proposition 5(c)), these effects cut in opposite directions, and the question becomes whether judicial review creates more instances of democratic failure than it corrects, or corrects more than it creates.

These results present some support and some challenges both for neo-Marshallian defenders of judicial review and for neo-Thayerian critics. On the one hand, it is possible in our model

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<sup>28</sup>Of course, the Judge will also erroneously strike down some justified extraordinary proposals, but in equilibrium the expected benefits of correct reversals outweigh the expected costs of erroneous reversals (see Remark 4).

for judicial review to worsen Voter welfare through a combination of judicial incompetence and judicial overhang, as some critics have warned. Indeed, this adverse effect may occur even though the Judge in our model has exactly the right policy preferences. So, judicial bias is not a necessary condition for judicial review to have adverse effects on democratic performance: Judicial review may cause a large increase in democratic failure (most likely through a strong bailout effect) that overwhelms whatever benefits may accrue from judicial correction of erroneous decisions. This suggests a potentially serious problem with judicial review that neo-Marshallian defenders of the institution must take seriously.

On the other hand, the analysis also highlights important limits to this “judicial overhang” concern. Increased democratic failure is not an inevitable consequence of judicial review—indeed, judicial review can *reduce* democratic failure, turning the judicial overhang argument on its head. Moreover, even if judicial review does increase the frequency of democratic failure, it may correct enough democratic failures by striking down unjustified actions that the net impact on the Voter’s expected current-period policy payoff is positive. Judicial review only has adverse effects on the Voter’s policy payoff if judicial review *both* induces a significant increase in democratic failure *and* cannot offset that cost by correcting a sufficiently large number of such failures. The analysis also highlights the fact that alleged judicial incompetence—a favorite theme of many critics of judicial review—is not, by itself, a sufficient condition for judicial review to have adverse effects on the Voter’s expected policy payoff, because of the endogeneity of judicial activism (see Remark 4).

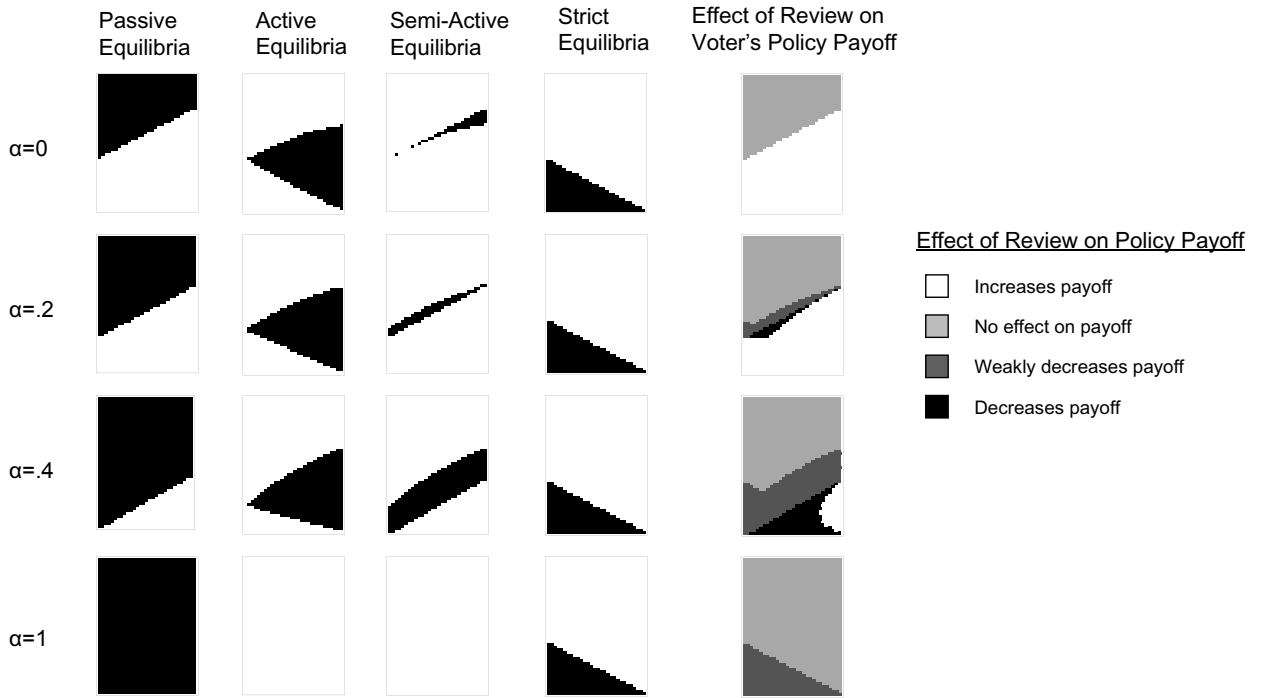
The fact that the Judge in our model is rational and cares about getting the policy right, coupled with the fact for certain parameters judicial review leads to worse expected policy outcomes, has an intriguing implication for our understanding of “justiciability” doctrines (standing, political question, etc.), many of which the U.S. Supreme Court has aggressively expanded over the course of the twentieth century. There are several plausible explanations for why judges would devise doctrines to limit their ability to hear certain cases, including the interests in reducing workload, avoiding controversy, pursuing substantive objectives surreptitiously, and controlling lower courts (e.g. Bickel 1962; Pierce 1999; Ho and Ross 2009). Our analysis suggests another possibility. Consider a situation in which judicial review would worsen the Voter’s current-period expected policy



payoff, because introducing judicial review induces an active equilibrium in which judicial screening does not offset the increased frequency with which the low-ability Leader proposes extraordinary action. Because the Judge shares the Voter’s policy preferences, it follows that the Judge is also worse off than she would be without judicial review. This does not mean that the Judge is behaving irrationally in using the active strategy—given a high level of democratic failure, the Judge is better off following her signal. But if the Judge could credibly commit to uphold the Leader’s proposal in all cases, the level of democratic failure would be lower, and the Judge would be better off. Whether such a commitment could ever be credible is a legitimate question, but one might plausibly interpret certain justiciability doctrines as judicial attempts to achieve such commitment.

We might also be interested in how the welfare consequences of judicial review are affected by the characteristics of the Leader ( $q$  and  $\alpha$ ) and the Judge ( $\gamma$ ), as well as the closely related issue of how variation in these parameters affects Voter welfare. An important insight of our analysis is that variation in these parameters may affect the Voter’s policy payoff in several different ways: *First*, variation in these parameters may determine the type of equilibrium played; *second*, given an equilibrium type, variation in these parameters may affect the level of democratic failure within that equilibrium; *third*, given an equilibrium type and a level of democratic failure, Leader and Judge characteristics affect both the rate of democratic failure and the rate of (correct and incorrect) invalidation of extraordinary proposals. This complexity, coupled with the fact that many of these effects are themselves non-monotonic and contingent on other parameters, makes presentation of comprehensible analytic results infeasible, so we again rely on simulations and examples to highlight the most important substantive points. Figure 2 presents the results of one illustrative simulation. The first four columns of Figure 2 reproduce Figure 1; the fifth column indicates whether judicial review has a positive or negative impact on the Voter’s current-period policy payoff for different configurations of parameter values. Figure 2 illustrates the non-monotonic effects of variation in these parameters on the desirability of judicial review, and suggests some important implications for how we think about the design and reform of judicial review as an institution.

Consider first the impact of judicial ability ( $\gamma$ ). One might naturally think that judicial review is always more desirable (compared to no review) when the Judge is more competent (higher  $\gamma$ ).



All simulations fix  $F(\hat{q}) = \hat{q}$  and  $p = .8$ .  
 $\gamma$  varies along the horizontal axis of each graph from .5 to .8.  
 $q$  varies along the vertical axis of each graph from 0 to 1.

Figure 2: Effect of Judicial Review on Voter's Current-Period Policy Payoff.

Figure 2 illustrates that this is not necessarily so. For instance, suppose that increasing  $\gamma$  induces a switch from a passive to an active equilibrium. We know that the Voter's current-period policy payoff in a passive equilibrium is identical to that when there is no review. However, in an active equilibrium, it is possible that the Voter's current-period policy payoff is lower than that with no review. In other words, since increasing the Judge's competence  $\gamma$  can increase the rate of democratic failure, increasing  $\gamma$  can have the effect of lowering the public's policy payoff from judicial review. This observation has implications for a variety of reform proposals that are intended to improve the quality of judicial review by, for example, facilitating judicial specialization (Meador 1981; Jordan

1981), selecting more judges with decision-relevant expertise (Vermeule 2007), facilitating judicial acquisition of outside expert advice (Schauer 2001), and reorienting legal scholarship to provide more information about the pragmatic consequences of judicial decisions (Posner 1998). If reforms along these lines increase  $\gamma$ , the impact on the ultimate quality of final policy decisions might well be desirable in many cases, but it need not be if these reforms induce a formerly deferential judge to become active, thereby increasing democratic failure substantially.

Let us next consider how the desirability of judicial review is affected by characteristics of the Leader ( $q$  and  $\alpha$ ), beginning with the probability that the Leader is competent ( $q$ ). Intuitively, one would expect that judicial review is more valuable when the Leader is less likely to be competent ( $q$  low), because the point of judicial review is to prevent such Leaders from bolstering their electoral prospects by implementing undesirable policies. This is indeed often the case, but there are also cases in which a decrease in the probability of a competent Leader actually weakens rather than strengthens the case for subjecting the Leader's decisions to judicial review. There are two reasons for this. *First*, lowering  $q$  might induce a switch from a passive equilibrium to a non-passive equilibrium—that is, judicial review might start having an effect on outcomes, whereas before it was essentially irrelevant (see Remark 5(c)). If the level of democratic failure is much higher in this new, non-passive equilibrium, then judicial review might become less attractive following a decrease in the Leader's expected competence. *Second*, even if the change in  $q$  does not affect the equilibrium type that would obtain under judicial review, variation in  $q$  may increase or decrease  $\pi_{act}^*$  (see Remark 3(c)(iii)). If a decrease in  $q$  decreases  $\pi_{act}^*$ , then judicial review does indeed become more attractive, as intuition would predict. But if a decrease in  $q$  increases  $\pi_{act}^*$ , then we again have two effects that cut in opposite directions: for this lower value of  $q$ , there are more incompetent Leaders who are prone to make unjustified proposals, but at the same time the introduction of judicial review will exacerbate the tendency of incompetent Leaders to make such proposals. If the latter effect is larger, then a decrease in the Leader's expected competence actually decreases the desirability of introducing judicial review. In this latter case, when  $q$  is low, the disease of democratic failure is worse, but so are the adverse side effects of the proposed judicial cure.

What about the relative strength of the Leader's interests in policy and reelection ( $\alpha$ )? Intu-

itively, judicial review is more likely to benefit the Voter when the Leader's interest in reelection is strong relative to his interest in good policy ( $\alpha$  low). There are two reasons for this. First, when  $\alpha$  is high, the probability of democratic failure without review is lower (see Proposition 1(c)), so the need for an additional check on the Leader is weaker. Second, when  $\alpha$  is high, the bailout effect of active review is stronger relative to the legitimation effect, which (usually) makes judicial review more likely to increase democratic failure (see Remark 3(c)(i)). Thus, when  $\alpha$  is high, not only is there less need for judicial review, but the potential for judicial review to make things worse is greater. By contrast, when the Leader's interest in reelection is very powerful ( $\alpha$  low), the level of democratic failure without judicial review is greater, and the legitimation effect is relatively stronger. This implies that, as a rule of thumb, judicial review is more likely to be desirable when elected officials care more about their reputation for being good policymakers than about actually making good policy. That said, an institutional designer confronted with a setting in which politicians care too much about reelection might want to introduce judicial review *or* might want to introduce other reforms that favor principled over ambitious politicians (that is, reforms that increase  $\alpha$ ), but the preceding analysis implies that doing *both* of these things might be worse than pursuing only the latter set of reforms, and might even be worse than doing nothing at all.

So far, we have been focused only on how judicial review affects the Voter's current-period policy payoff. It is also important to consider how judicial review affects the efficacy of the electoral process in selecting for competent Leaders, which in turn affects the Voter's long-term welfare. Because we do not model future periods explicitly, we cannot provide a fully micro-founded view of how judicial review affects future welfare. That said, we can nonetheless make the following observations:

First, and most straightforwardly, if judicial review induces a passive equilibrium, judicial review has no effect on Voter learning. Next, if judicial review induces a strict equilibrium, then Voter learning is actually worse than in the no review case: If there is no judicial review, the Voter learns nothing from the Judge, but can at least learn something from the Leader's action; under strict review there is no helpful judicial signal *and* the competent and incompetent Leaders choose the extraordinary action with identical probabilities, making the Leader's action totally uninformative. If judicial review induces an equilibrium in which the Judge may follow her signal (an active, semi-

active, or semi-strict equilibrium), the result is more complicated in light of the fact that judicial review can affect Voter learning via two distinct channels: *first*, when the Judge follows her signal, this conveys additional information to the Voter; *second*, by changing the level of democratic failure, judicial review affects the Voter’s ability to draw inferences directly from the Leader’s action. If review has a minimal effect on the low-ability Leader’s behavior, then judicial review increases Voter learning; however, if judicial review has a substantial affect on the Leader’s behavior, then Voter learning may be better or worse than in the no review case.

It is important to emphasize that it is not necessarily the case that if judicial review improves the Voter’s expected current-period policy payoff, it also improves Voter learning (or vice versa). Although these effects will often cut in the same direction—favorable or unfavorable to judicial review—it is possible to construct scenarios in which they cut in opposite directions. Therefore, institutional designers interested in assessing the value of judicial review as an institution must be attentive *both* to how judicial review affects policy outcomes *and* how it affects the efficacy of the electoral process in selecting high-quality political leaders. The former consideration is familiar and common in the literature; the latter consideration, however, is often overlooked.

## V. Extensions

### Informative Dicta

Our principal analysis assumed that the Voter could observe the Judge’s decision,  $d$ , but not her signal,  $s$ . This assumption is contestable in light of the fact that courts usually explain their decisions in written opinions, and these written opinions often go beyond the analysis necessary for the disposition of the case (the “holding”) to include non-binding observations or opinions (“dicta”) that provide additional information about the judges’ views. One might therefore argue that written opinions, and particularly dicta, should enable the Judge in our model to communicate her signal directly to the Voter. We now address this possibility.<sup>29</sup>

Consider a case where the Judge rationally upholds an extraordinary proposal even though  $s = n$  (always the case in the passive equilibrium, and sometimes the case in the semi-active

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<sup>29</sup>In this extension, the Judge more closely resembles the media as modeled by Ashworth and Shotts (2008).

equilibrium). If the Judge in this case reveals  $s$  to the Voter through informative dicta, there are two effects on Voter welfare. *First*, such disclosure helps the Voter draw more accurate inferences about the state, and hence about the Leader’s competence, which improves electoral sorting. This improves Voter welfare. *Second*, disclosure gives rise to the “legitimation effect.” If this effect tends to reduce democratic failure, as we have argued is more likely, disclosure of the Judge’s signal reduces democratic failure, improving Voter welfare through this channel as well.<sup>30</sup>

These observations suggest we may have undersold the value of judicial review by assuming  $s$  is private information. We nonetheless think the assumption is reasonable in most cases. Although judges do write opinions, actual case dispositions are likely to be more salient for most voters than the judges’ written explanations. Furthermore, a Judge who defers to the Leader’s proposal might not have an incentive to disclose her contrary signal, as doing so may be mildly costly and does not affect the case disposition (which, in our model, is all the Judge cares about). Indeed, it is plausible that if the Judge must pay some small cost to acquire the signal at all—if, for instance, she must do some research or thinking in order to assess the merits of the case—she may simply not bother to do so in a passive equilibrium, as she knows that her signal would not affect her decision.

## Judicially-Imposed Enactment Costs

Our principal analysis assumed that the Judge must make a binary decision,  $d \in \{uphold, strike\}$ ; the Judge cannot offer the Leader a more nuanced incentive contract. We motivated this assumption with the observation that it seems to correspond with how real-world judicial review usually operates. But, as the political economy literature has demonstrated, less-informed principals can typically do better by offering variable payments or penalties to their agents than by specifying certain choices as *per se* permitted or prohibited (Baron 2000; Gailmard 2009). Some legal scholars have applied this insight to judicial review, suggesting that many judicial doctrines in effect condition approval of the government’s action on the government’s payment of some “enactment

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<sup>30</sup>If, however, the legitimation effect increases democratic failure due to convexities in  $F$ , disclosure can worsen democratic failure, which harms Voter welfare. In this case the two effects noted in the text cut in opposite directions, making the overall effect of disclosure on Voter welfare ambiguous. In those situations where the judge chooses  $d = strike$  even when  $s = x$  (always the case in the strict equilibrium, and sometimes the case in the semi-strict equilibrium), the only effect of disclosure is the improvement of electoral sorting; there is no legitimation effect in these situations. Thus in this case, disclosure always improves Voter welfare.

cost,” and arguing that this approach, at least in theory, can approximate the more nuanced sort of variable incentive schemes observed elsewhere (Young 2000; Stephenson 2008).

If the Judge in our model were able to implement such an approach, then judicial review could completely eliminate the democratic failure problem. To see why, recall that in any non-strict equilibrium, the expected utility of choosing  $a = x$  is always strictly greater for the competent Leader who observes  $\omega = x$  than for the incompetent Leader. If the Judge can impose an extra enactment cost on the Leader who chooses  $a = x$ , she can exploit this expected utility difference by setting the enactment cost high enough that only a competent Leader who observes  $\omega = x$  would be willing to select the extraordinary action.<sup>31</sup>

We acknowledge this possibility, but there are a number of potential obstacles to the implementation of such a strategy that may limit its applicability. First, this strategy presumes the Judge can commit to reject an extraordinary proposal if the Leader fails to take the additional costly action, but such commitment may not be credible. Second, correctly calibrating the enactment cost, and observing whether the Leader has in fact paid it, may be difficult in many real-world settings. Third, if the enactment cost entails a substantial social cost, the benefit to the Judge (and the Voter) of eliminating the sort of democratic failure we analyze here may not be worth it. These concerns do not mean that this alternative strategy is unimportant, but they suggest that it remains worthwhile to analyze settings where the Judge must make an after-the-fact yes-or-no decision, as in our principal analysis.

## Conclusion

This paper contributes to debates about the appropriate role of judicial review in a democracy by using a formal political agency model to investigate how judicial review affects the incidence and impact of one particular form of democratic failure—the electoral incentive for low-ability leaders

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<sup>31</sup>More formally, define  $K = (1 - \alpha) \left( F(1) - F\left(\frac{pq}{pq+1-q}\right) \right) + \alpha(1 - 2p)$ . Next, consider the following strategy for the Judge: uphold a proposal of  $a = x$  if and only if the Leader incurs some observable cost  $K + \epsilon$ , where  $\epsilon \in (0, 2\alpha p)$ . In this case, an incompetent Leader would never choose  $a = x$ , because even if doing so would convince the Voter that the Leader is competent, the associated expected utility gain ( $K$ ) is not enough to offset the additional cost ( $K + \epsilon$ ). But, the competent Leader would still choose  $a = x$  if  $\omega = x$ , because  $(1 - \alpha) \left( F(1) - F\left(\frac{pq}{pq+1-q}\right) \right) + \alpha > K + \epsilon$ .

to undertake bold, but ill-advised, policy initiatives in order to project a false image of competence. Our analysis, though limited in scope, has generated a number of potentially useful insights about the relationship between judicial review and democratic performance. In particular, we showed that judicial review may increase or decrease the rate of democratic failure, depending on the relative strength of the “bailout” and “legitimation” effects of judicial review; that rational (and unbiased) judges will only engage in active review if the level of democratic failure is high enough but not too high, such that the judge’s own information becomes decisive; and that a complete positive and normative evaluation of judicial review must take all these factors into account. Our analysis also generates a number of sometimes surprising comparative statics predictions, including the findings that increasing judicial ability or reducing the probability of a competent elected leader may sometimes decrease rather than increase the desirability of judicial review. More generally, we derive conditions under which judicial review may improve or worsen voter welfare through a direct impact on policy outcomes and through an indirect impact on electoral sorting. The analysis also predicts, and provides a rationalist explanation for, a number of phenomena often associated with real-world judicial systems, including judicial deference, judicial unpredictability, and judicially-created limits on the courts’ own jurisdiction.

Beyond these contributions, the larger objective of this paper is to help lay the groundwork for a more ambitious research program that would rigorously analyze the effect of judicial review on democratic performance in a formal political agency framework. Subsequent research could build on our preliminary analysis in a number of ways. First, while our analysis has focused narrowly on one particular form of democratic failure, the same general approach might be applied to other forms of democratic failure as well. Also, while our analysis here made the simplifying assumption that the Judge shares the Voter’s policy preferences, future work should relax that assumption, and could also incorporate the richer characterization of judicial institutions that has started to emerge in the judicial politics literature—taking into account, for example, the hierarchical structure of the courts, litigation and judicial agenda-setting, collective decision-making by multi-member courts, the complexity of legal doctrine, and problems of endogenous compliance with judicial decisions. Research along these and other lines would further enrich our understanding of the costs and



benefits of judicial review. In addition, the framework we have developed here, when combined with the emerging literature on separation-of-powers between elected branches of government (e.g. Persson, Roland and Tabellini 1997; Fox and Van Weelden 2008; Vlaicu 2008), may facilitate direct comparisons between judicial and political oversight of government decision-making—a crucial issue in contemporary legal and policy debates, which the extant political economy literature has not fully engaged.

# Appendix

## Preliminaries

### The Voter's Beliefs About the Leader's Ability

Suppose the low-ability Leader proposes  $a = x$  with probability  $\pi$ . And suppose the Judge's strategy is represented by the double  $\sigma = (\sigma_n, \sigma_x)$ . Absent review, the Leader's reputation from action  $a$  will be denoted by  $\hat{q}(a; \pi)$ . 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,

$$\begin{aligned}\hat{q}(x; \pi) &\equiv \frac{(1-p)q}{(1-p)q + \pi(1-q)} \\ \hat{q}(n; \pi) &\equiv \frac{pq}{pq + (1-\pi)(1-q)}.\end{aligned}$$

With review, the Leader's reputation is  $\hat{q}(a, d; \pi, \sigma)$ , where  $d$  denotes the Judge's ruling. Since we assume the Judge chooses  $d = uphold$  when  $a = n$ , we have  $\hat{q}(n, uphold; \pi, \sigma) = \hat{q}(n; \pi)$ . All that remains is to specify  $\hat{q}$  when  $a = x$  and this proposal is subject to judicial review. If when  $a = x$ , the Judge issues ruling  $d$  with positive probability, then, by Bayes' Rule, we have

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

Writing  $\lambda(t, \sigma)$  for the probability proposal  $a = x$  is upheld when the Leader's type is  $t$ ,<sup>32</sup> we have

$$\begin{aligned}\lambda(h, \sigma) &\equiv \sigma_x \gamma + \sigma_n (1 - \gamma) \\ \lambda(l, \sigma) &\equiv \sigma_x [(1-p)\gamma + p(1-\gamma)] + \sigma_n [(1-p)(1-\gamma) + p\gamma].\end{aligned}$$

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<sup>32</sup>That is,  $\lambda(t, \sigma) = Pr(uphold|x, t)$ , where  $Pr(uphold|x, t) = \sum_{\omega} Pr(\omega|x, t)[\sigma_x Pr(s=x|\omega) + \sigma_n Pr(s=n|\omega)]$ .

As such,

$$\begin{aligned}\hat{q}(x, uphold; \pi, \sigma) &\equiv \frac{\lambda(h, \sigma)(1-p)q}{\lambda(h, \sigma)(1-p)q + \lambda(l, \sigma)\pi(1-q)} \\ \hat{q}(x, strike; \pi, \sigma) &\equiv \frac{[1 - \lambda(h, \sigma)](1-p)q}{[1 - \lambda(h, \sigma)](1-p)q + [1 - \lambda(l, \sigma)]\pi(1-q)}.\end{aligned}$$

### 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  $\omega$ , 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, as we have assumed the high-ability Leader chooses  $a = \omega$ . The low-ability Leader's incentive to propose a particular policy depends upon the 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 taking action  $a$  when the Judge's strategy is  $\sigma$ . Since  $E_{\omega, d}[u(a, d; \omega); \sigma] = \sum_{\omega, d} Pr(d|\omega)Pr(\omega)u(a, d; \omega)$ , by the definition of  $u(a, d; \omega)$ , we have  $E_{\omega, d}[u(n, d; \omega); \sigma] = p$  and  $E_{\omega, d}[u(x, d; \omega); \sigma] = p \cdot [(1 - \sigma_n)\gamma + (1 - \sigma_x)(1 - \gamma)] + (1 - p) \cdot [\sigma_n(1 - \gamma) + \sigma_x\gamma]$ .

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  $\pi$ , the Judge's strategy is  $\sigma$ , and beliefs about the Leader's ability are derived via Bayes' Rule. Since

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

we have that  $E_d[F(\hat{q}(n, d; \pi, \sigma))] = F(\hat{q}(n; \pi))$  and

$$E_d[F(\hat{q}(x, d; \pi, \sigma))] = \lambda(l, \sigma)F(\hat{q}(x, uphold; \pi, \sigma)) + (1 - \lambda(l, \sigma))F(\hat{q}(x, strike; \pi, \sigma)).$$

We will write  $\Delta^p(\sigma) \equiv E_{\omega,d}[u(x, d; \omega); \sigma] - E_{\omega,d}[u(n, d; \omega); \sigma]$  for the low-ability Leader's net policy payoff from choosing  $a = x$  when the Judge's strategy is  $\sigma$ , 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  $\pi$ , the Judge's strategy is  $\sigma$ , and beliefs about the Leader's ability are derived via Bayes' Rule. 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  $a = x$ . 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  $a = n$ .

### 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  $\pi$ . 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,

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

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 low-ability Leader chooses  $a = x$  with probability  $\pi$ . 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  $E_\omega[u(x, uphold; \omega)|s, \pi] = 1 - \hat{p}(s; \pi)$ .

## The Voter's Policy Payoff

Write  $E_{a,d,\omega}[u(a, d; \omega); (\pi, \sigma), t] = \sum_{a,d,\omega} u(a, d; \omega) Pr(d|a, \omega) Pr(a|t, \omega) Pr(\omega)$  for the Voter's expected current-period policy payoff given  $t$ ,  $\pi$ , and  $\sigma$ . Hence,

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

and

$$\begin{aligned} E_{a,d,\omega}[u(a, d; \omega); (\pi, \sigma), l] &\equiv p((1 - \pi) + \pi((1 - \sigma_x)(1 - \gamma) + (1 - \sigma_n)\gamma)) \\ &\quad + (1 - p)(\pi(\sigma_x \gamma + \sigma_n(1 - \gamma))). \end{aligned}$$

In what follows, we denote the Voter's expected current-period policy payoff from strategy profile  $(\pi, \sigma)$  as  $V(\pi, \sigma)$ , where  $V(\pi, \sigma) = qE_{a,d,\omega}[u(a, d; \omega); (\pi, \sigma), h] + (1 - q)E_{a,d,\omega}[u(a, d; \omega); (\pi, \sigma), l]$ .

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

Proof of part (a). We first show that  $\Delta(\pi, \sigma)$  is decreasing in  $\pi$ . Taking the derivative of the low-ability Leader's net benefit from the extraordinary action with respect to  $\pi$ , we have

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

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

We now show that  $\Delta(1, \sigma) < 0$ . If  $\alpha = 1$ , this follows immediately, as  $\Delta^p(\sigma) < 0$ . Moreover, since  $\Delta^p(\sigma) < 0$ , when  $\alpha < 1$ , 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  $F(1)$ . This is so because of the fact that if the Judge's strategy places positive probability on ruling  $d$ , Bayes' rule implies  $\hat{q}(x, d; 1, \sigma) < 1$ .

Proof of part (b). Suppose  $\Delta(0, \sigma) > 0$ . We know from part (a) that when  $\pi = 1$ ,  $\Delta(1, (\sigma_n, \sigma_x)) < 0$ . Hence, any solution to  $\Delta(\pi, (\sigma_n, \sigma_x)) = 0$  in  $\pi$  lies in  $(0, 1)$ . Since  $\Delta$  is continuous in  $\pi$ ,  $\Delta(0, (\sigma_n, \sigma_x)) > 0$ , and  $\Delta(1, (\sigma_n, \sigma_x)) < 0$ , the Intermediate Value Theorem applies. Hence, there exists  $\hat{\pi} \in (0, 1)$  such that  $\Delta(\hat{\pi}, (\sigma_n, \sigma_x)) = 0$ . That the solution to  $\Delta(\pi, (\sigma_n, \sigma_x)) = 0$  in  $\pi$  is unique follows from the fact that  $\Delta$  is monotone in  $\pi$ . ■

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

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

**Lemma 2** *Assume  $(\pi^*, \sigma^*)$  is part of an equilibrium. Then  $\pi^* = \psi(\sigma_n^*, \sigma_x^*)$ .*

Proof: Suppose  $(\pi^*, \sigma^*)$  is part of an equilibrium. Thus, Voter beliefs are  $\hat{q}(\cdot; \pi^*, \sigma^*)$  and the low-ability Leader's net benefit from  $a = x$  is  $\Delta(\pi^*, \sigma^*)$ . We need to show that  $\pi^* = \psi(\sigma_n^*, \sigma_x^*)$ .

Begin by supposing that  $\Delta(0, \sigma^*) \leq 0$ . And, by way of contradiction, suppose that  $\pi^* \neq \psi(\sigma_n^*, \sigma_x^*)$  – i.e.,  $\pi^* > 0$ .  $\pi^* > 0$  implies that the low-ability Leader's net benefit from selecting  $a = x$  is non-negative. Hence,  $\Delta(\pi^*, \sigma^*) \geq 0$ . To derive a contradiction, notice the following: By supposition,  $\Delta(0, \sigma^*) \leq 0$ , and, by Lemma 1,  $\Delta(\pi, \sigma^*)$  is decreasing in  $\pi$ . Together, these observations imply that  $\Delta(\pi^*, \sigma^*) < 0$ , a contradiction.

Now suppose that  $\Delta(0, \sigma^*) > 0$ . Notice that  $\pi^*$  cannot equal 0 or 1. If  $\pi^* = 0$ , then  $\Delta(0, \sigma^*) \leq 0$ , which yields a contradiction. If  $\pi^* = 1$ , then  $\Delta(1, \sigma^*) \geq 0$ . However, by Lemma 1, 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  $\pi$  is unique, it follows that  $\pi^* = \psi(\sigma^*)$ . ■

Let  $\theta$  denote a generic parameter of the model. Suppose that when  $\theta = \bar{\theta}$ ,  $\Delta(\pi, \sigma; \bar{\theta}) = 0$  has a solution in  $\pi$ , say  $\bar{\pi}$ . As the requirements of the Implicit Function Theorem are satisfied at  $(\bar{\theta}, \bar{\pi})$ , there is a function  $\pi^*(\theta)$  defined on an open interval about  $\bar{\theta}$  such that  $\Delta(\pi^*(\theta), \sigma; \theta) = 0$  for all  $\theta$  in this interval,  $\pi^*(\bar{\theta}) = \bar{\pi}$ , and

$$\frac{\partial \pi^*(\bar{\theta})}{\partial \theta} = -\frac{\frac{\partial \Delta(\bar{\pi}, \sigma; \bar{\theta})}{\partial \theta}}{\frac{\partial \Delta(\bar{\pi}, \sigma; \bar{\theta})}{\partial \pi}}.$$

Since the denominator of the right-hand side of this equality is always negative (see Lemma 1), the sign of  $\frac{\partial \pi^*(\bar{\theta})}{\partial \theta}$  is determined by the numerator, a fact we invoke in proving the following lemma.

**Lemma 3** (a) Suppose the Judge's strategy is either passive or active. And at  $\bar{\alpha}$ , suppose that  $\Delta(\bar{\pi}, \sigma; \bar{\alpha}) = 0$ . Then,  $\frac{\partial \pi^*(\bar{\alpha})}{\partial \alpha} < 0$ . (b) Suppose the Judge's strategy is either passive or active. And at  $\bar{q}$ , suppose that  $\Delta(\bar{\pi}, \sigma; \bar{q}) = 0$ . The sign of  $\frac{\partial \pi^*(\bar{q})}{\partial q}$  is ambiguous. (c) Suppose the Judge's strategy is active. And at  $\bar{\gamma}$ , suppose that  $\Delta(\bar{\pi}, \sigma; \bar{\gamma}) = 0$ . The sign of  $\frac{\partial \pi^*(\bar{\gamma})}{\partial \gamma}$  is ambiguous.

Proof of part (a). Suppose the Judge's strategy is passive or active, and  $\Delta(\bar{\pi}, \sigma; \bar{\alpha}) = \alpha \Delta^p(\sigma) - (1 - \alpha) \Delta^e(\bar{\pi}, \sigma) = 0$ . Since the low-ability Leader's net policy payoff from  $a = x$ ,  $\Delta^p(\sigma)$ , is negative, the low-ability Leader's net electoral payoff from  $a = x$ ,  $\Delta^e(\bar{\pi}, \sigma)$ , is non-negative. Hence

$$\frac{\partial \Delta(\bar{\pi}, \sigma; \bar{\alpha})}{\partial \alpha} = \Delta^p(\sigma) - \Delta^e(\bar{\pi}, \sigma) < 0,$$

which in turn implies that  $\frac{\partial \pi^*(\bar{\alpha})}{\partial \alpha} < 0$ .

Proof of part (b). Suppose the Judge's strategy is passive or active, and  $\Delta(\bar{\pi}, \sigma; \bar{q}) = 0$ .

$$\frac{\partial \Delta(\bar{\pi}, \sigma; \bar{q})}{\partial q} = \frac{\partial E_d[F(\hat{q}(x, d; \bar{\pi}, \sigma))]}{\partial q} - \frac{\partial F(\hat{q}(n; \bar{\pi}))}{\partial q}.$$

Since both terms on the right-hand side of the above equality are positive, the sign of  $\frac{\partial \Delta(\bar{\pi}, \sigma; \bar{q})}{\partial q}$  is ambiguous. Consequently, the sign of  $\frac{\partial \pi^*(\bar{q})}{\partial q}$  is ambiguous.

Proof of part (c). Suppose the Judge's strategy is active and  $\Delta(\bar{\pi}, (0, 1); \bar{\gamma}) = 0$ . Thus,

$$\frac{\partial \Delta(\bar{\pi}, (0, 1); \bar{\gamma})}{\partial \gamma} = \alpha + (1 - \alpha) \frac{\partial \Delta^e(\bar{\pi}, (0, 1))}{\partial \gamma},$$

where

$$\begin{aligned} \frac{\partial \Delta^e(\bar{\pi}, (0, 1))}{\partial \gamma} &= \underbrace{\frac{\partial \lambda(l, (0, 1))}{\partial \gamma} [F(\hat{q}(x, \text{uphold}; \bar{\pi}, (0, 1))) - F(\hat{q}(x, \text{strike}; \bar{\pi}, (0, 1)))]}_{a} + \\ &\quad \underbrace{\lambda(l, (0, 1)) \frac{\partial F(\hat{q}(x, \text{uphold}; \bar{\pi}, (0, 1)))}{\partial \hat{q}} \frac{\partial \hat{q}(x, \text{uphold}; \bar{\pi}, (0, 1))}{\partial \gamma}}_{b} + \\ &\quad \underbrace{(1 - \lambda(l, (0, 1))) \frac{\partial F(\hat{q}(x, \text{strike}; \bar{\pi}, (0, 1)))}{\partial \hat{q}} \frac{\partial \hat{q}(x, \text{strike}; \bar{\pi}, (0, 1))}{\partial \gamma}}_{c}. \end{aligned}$$

Since  $\frac{\partial \lambda(l, (0, 1))}{\partial \gamma} = 1 - 2p > 0$  (as  $p > \frac{1}{2}$ ) and  $F(\hat{q}(x, \text{uphold}; \bar{\pi}, (0, 1))) > F(\hat{q}(x, \text{strike}; \bar{\pi}, (0, 1)))$  (by inspection), (a) is negative, (b) is positive, and (c) is negative, so the sign of  $\frac{\partial \Delta^e(\bar{\pi}, (0, 1))}{\partial \gamma}$  is ambiguous. Consequently, the sign of  $\frac{\partial \pi^*(\bar{q})}{\partial \gamma}$  is ambiguous. ■

**Proof of Proposition 1.**

Proof of part (a). The game without judicial review is strategically equivalent to the game with judicial review if the Judge's strategy is fixed as passive. Thus, by Lemma 2,  $\pi_{\text{no rev}}^* = \psi(1, 1)$ . All that remains to verify is that  $\pi_{\text{no rev}}^* \leq (1 - p)$ . By way of contradiction, suppose  $\pi_{\text{no rev}}^* > (1 - p)$ . Thus, the net benefit from  $a = x$  is non-negative. Notice that when  $\pi_{\text{no rev}}^* > (1 - p)$ ,  $\hat{q}(n; \pi_{\text{no rev}}^*) > \hat{q}(x; \pi_{\text{no rev}}^*)$ : the net electoral benefit to the low-ability Leader from the extraordinary action is negative. This, combined with the fact that net policy benefit to the low-ability Leader from  $a = x$  is non-positive implies that net benefit from  $a = x$  is negative, a contradiction.

Proof of part (b). The low-ability Leader's net benefit from  $a = x$  is at most  $\Delta(0, (1, 1))$ , where

$$\Delta(0, (1, 1)) = \alpha(1 - 2p) + (1 - \alpha) \left( F(1) + F\left(\frac{pq}{pq + (1 - q)}\right) \right).$$

This fact, taken together with Lemma 2, establishes that when

$$\alpha(2p - 1) \geq (1 - \alpha) \left( F(1) + F\left(\frac{pq}{pq + (1 - q)}\right) \right),$$

$\pi_{\text{no rev}}^* = 0$ ; otherwise,  $\pi_{\text{no rev}}^* > 0$ .



Proof of part (c). Let  $\bar{\alpha}$  denote the solution to  $\Delta(0, (1, 1)) = 0$  in  $\alpha$ . Thus,  $\Delta(0, (1, 1)) > 0$  on  $[0, \bar{\alpha})$  and  $\Delta(0, (1, 1)) = 0$  on  $[\bar{\alpha}, 1]$ . Consequently, by Lemma 2 and part (a) of Lemma 3,  $\pi_{norev}^*$  is decreasing on  $[0, \bar{\alpha})$  and, by Lemma 2,  $\pi_{norev}^* = 0$  on  $[\bar{\alpha}, 1]$ . Thus,  $\pi_{norev}^*$  is weakly decreasing in  $\alpha$ . That the effect of  $q$  on  $\pi_{norev}^*$  is ambiguous is a consequence of part (b) of Lemma 3. ■

**Proof of Proposition 2.**

Proof of part (a). Result is immediate.

Proof of part (b). The net payoff to the low-ability Leader from  $a = x$  when the Judge uses a strict strategy is  $\Delta(\pi, (0, 0)) = (1 - \alpha)(F(\hat{q}(x; \pi)) - F(\hat{q}(n; \pi)))$ . Since  $\Delta(0, (0, 0)) > 0$ , it follows from Lemma 2 that  $\pi_{strict}^*$  is equal to the unique solution to  $\Delta(\pi, (0, 0)) = 0$  in  $\pi$ . Notice that  $\Delta(\pi, (0, 0)) = 0$  iff  $F(\hat{q}(x; \pi)) = F(\hat{q}(n; \pi))$ . Given that the latter equality holds when  $\pi = (1 - p)$ , it follows that  $\pi_{strict}^* = (1 - p)$ .

Proof of part (c). That the low-ability Leader's equilibrium strategy is uniquely defined when the Judge uses an active strategy follows from Lemma 1 and Lemma 2. That the ordering of  $\pi_{act}^*$  and  $\pi_{norev}^*$  is ambiguous can be seen from the following pair of examples. Consider a parameterization of our model in which  $\alpha = 0$ ,  $q = .5$ ,  $p = .8$ ,  $F(\hat{q}) = \hat{q}$ , and  $\gamma = .781$ . Then,  $\pi_{norev}^* \approx .2$  and  $\pi_{act}^* \approx .1326$ . Next, consider a parameterization in which  $\alpha = .2$ ,  $q = .5$ ,  $p = .8$ ,  $F(\hat{q}) = \hat{q}$ , and  $\gamma = .781$ . Then,  $\pi_{norev}^* \approx .1195$  and  $\pi_{act}^* \approx .1300$ .

**Proof of Proposition 3.** Consider an equilibrium in which the low-ability Leader proposes  $a = x$  with probability  $\pi^*$ . By Bayes' rule, the probability that the Judge assigns to  $\omega = n$  when her signal of the state is  $s$  and  $a = x$  is  $\hat{p}(s; \pi^*)$ , so the Judge's payoff from upholding  $a = x$  is  $1 - \hat{p}(s; \pi^*)$ , whereas her payoff from overruling  $a = x$  is  $\hat{p}(s; \pi^*)$ . Thus, 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  $\pi^* \leq \bar{T}$ . Finally, observe that  $\underline{T} < \bar{T}$ , as  $\gamma > \frac{1}{2}$ . Parts (a) through (e) immediately follow from the preceding observations. ■

**Proof of Proposition 4.** By definition,  $\pi_{pass}^* \equiv \psi(1, 1)$ ,  $\pi_{act}^* \equiv \psi(0, 1)$ , and  $\pi_{strict}^* \equiv \psi(0, 0) = 1 - p$ . Consequently, parts (a) through (e) of this proposition are essentially direct implications of

Proposition 2 and Proposition 3, taken together with Lemma 2.

That an equilibrium always exists is a consequence of the following argument: By part (a), if  $\pi_{pass}^* \leq \underline{T}$ , a passive equilibrium exists; by part (b), if  $\pi_{act}^* \in [\underline{T}, \overline{T}]$ , an active equilibrium exists; by part (c), if  $\pi_{strict}^* \geq \overline{T}$ , a strict equilibrium exists. So, consider the remaining possibility: a situation in which neither an active nor a passive nor a strict equilibrium exists, meaning that  $\pi_{pass}^* > \underline{T}$  and  $\pi_{act}^* \notin [\underline{T}, \overline{T}]$  and  $\pi_{strict}^* < \overline{T}$ . We will show that when  $\pi_{act}^* < \underline{T}$  a semi-active equilibrium exists and when  $\pi_{act}^* > \overline{T}$  a semi-strict equilibrium exists.

Suppose  $\pi_{act}^* < \underline{T}$  and  $\pi_{pass}^* > \underline{T}$ . As  $0 \leq \pi_{act}^* < \underline{T} < \pi_{pass}^* < 1$ , we have that  $\Delta(\pi_{act}^*, (0, 1)) \leq 0$  and  $\Delta(\pi_{pass}^*, (1, 1)) = 0$ . These facts, taken together with the fact that  $\Delta$  is decreasing in  $\pi$ , imply that  $\Delta(\underline{T}, (0, 1)) < 0$  and  $\Delta(\underline{T}, (1, 1)) > 0$ . This implication, taken together with the fact that  $\Delta$  is continuous in  $\sigma_n$ , ensures that the Intermediate Value Theorem applies, so  $\Delta(\underline{T}, (\sigma_n, 1)) = 0$  for some  $\sigma_n \in (0, 1)$ . Thus, it follows from part (d) that a semi-active equilibrium exists.

Now suppose that  $\pi_{act}^* > \overline{T}$  and  $\pi_{strict}^* < \overline{T}$ . As  $0 < \pi_{strict}^* < \overline{T} < \pi_{act}^* < 1$ , we have that  $\Delta(\pi_{strict}^*, (0, 0)) = 0$  and  $\Delta(\pi_{act}^*, (0, 1)) = 0$ . These facts, taken together with the fact that  $\Delta$  is decreasing in  $\pi$ , imply that  $\Delta(\overline{T}, (0, 0)) < 0$  and  $\Delta(\overline{T}, (0, 1)) > 0$ . Given that  $\Delta$  is continuous in  $\sigma_x$ , this ensures that the Intermediate Value Theorem applies, so  $\Delta(\overline{T}, (0, \sigma_x)) = 0$  for some  $\sigma_x \in (0, 1)$ . Thus, it follows from part (e) that a semi-strict equilibrium exists. ■

The following lemma will be invoked in proving Proposition 5.

**Lemma 4** *Let  $V^*(\pi) = \max\{V(\pi, (\sigma_n, \sigma_x)) | (\sigma_n, \sigma_x) \in [0, 1]^2\}$ . First, given a fixed level of  $\pi$ , the judicial strategy that maximizes the public's welfare is the one that the Judge would adopt in an equilibrium with distortion level  $\pi$ . As such,*

$$V^*(\pi) = \begin{cases} V(\pi, (1, 1)) & \text{if } \pi \leq \underline{T} \\ V(\pi, (0, 1)) & \text{if } \pi \in (\underline{T}, \overline{T}) \\ V(\pi, (1, 1)) & \text{if } \pi \geq \overline{T} \end{cases} .$$

*Second,  $V^*(\pi)$  is continuous, decreasing on  $[0, \overline{T})$ , and is constant on  $[\overline{T}, 1]$ .*

Proof: Differentiating  $V$  with respect to  $\sigma_x$  and  $\sigma_n$ , yields

$$\begin{aligned}\frac{\partial V(\pi, \sigma_n, \sigma_x)}{\partial \sigma_n} &= (1-p)q(1-\gamma) - (1-q)(p+\gamma-1)\pi \\ \frac{\partial V(\pi, \sigma_n, \sigma_x)}{\partial \sigma_x} &= (1-p)q\gamma - (1-q)(p-\gamma)\pi.\end{aligned}$$

Thus, we have: If  $\frac{\partial V(\pi, \sigma_n, \sigma_x)}{\partial \sigma_j} > 0$ , then  $(\sigma_n, \sigma_x) \in \arg \max\{V(\pi, (\sigma_n, \sigma_x)) | (\sigma_n, \sigma_x) \in [0, 1]^2\}$  iff  $\sigma_j = 1$ ; if  $\frac{\partial V(\pi, \sigma_n, \sigma_x)}{\partial \sigma_j} = 0$ , then any  $\sigma_j \in [0, 1]$  is a maximizer of  $V$ ; and if  $\frac{\partial V(\pi, \sigma_n, \sigma_x)}{\partial \sigma_j} < 0$ , then  $(\sigma_n, \sigma_x) \in \arg \max\{V(\pi, (\sigma_n, \sigma_x)) | (\sigma_n, \sigma_x) \in [0, 1]^2\}$  iff  $\sigma_j = 0$ . Notice that  $\frac{\partial V(\pi, \sigma_n, \sigma_x)}{\partial \sigma_n} \geq 0$  iff  $\pi \leq \underline{T}$  and  $\frac{\partial V(\pi, \sigma_n, \sigma_x)}{\partial \sigma_x} \geq 0$  iff  $\pi \leq \bar{T}$ . Given that  $\underline{T} < \bar{T}$ , the specified form of  $V^*(\pi)$  then follows.

Since  $V$  is continuous in its arguments and the set of judicial strategies is compact, the Theorem of Maximum applies, implying that  $V^*$  is continuous in  $\pi$ .

Finally, differentiating  $V$  with respect to  $\pi$  yields

$$\frac{\partial V(\pi, \sigma_n, \sigma_x)}{\partial \pi} = -(1-q)((p+\gamma-1)\sigma_n + (p-\gamma)\sigma_x).$$

Since  $p > \gamma > \frac{1}{2}$ , this derivative is negative whenever  $\sigma_x + \sigma_n > 0$ ; however, when  $\sigma_n = \sigma_x = 0$ , this derivative is equal to zero. Hence,  $V^*$  is decreasing on  $[0, \bar{T})$  and is constant on  $[\bar{T}, 1]$ . ■

### **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  $\pi_{pass}^*$ , which is equivalent to  $\pi_{norev}^*$ . Hence, the Voter's current policy payoff is equivalent to that with no review.

Proof of part (b). Suppose judicial review induces a non-passive equilibrium, so  $\pi^* \geq \underline{T}$ . And suppose that  $\pi^* \leq \pi_{norev}^*$ . Hence,  $\pi_{norev}^* \geq \pi^* \geq \underline{T}$ . There are two cases to consider:  $\pi_{norev}^* = \pi^* = \underline{T}$  and  $\pi_{norev}^* \geq \pi^* > \underline{T}$ . When  $\pi_{norev}^* = \pi^* = \underline{T}$ , the Voter's current-period policy payoff with review is equal to that without. Now consider the case in which  $\pi_{norev}^* \geq \pi^* > \underline{T}$ . We will show that the Voter's current-period policy payoff is strictly greater with review. By definition, the Voter's current-period policy payoff without review is  $V(\pi_{norev}^*, (1, 1))$ . Since  $\pi^* > \underline{T}$ , it follows from Lemma 4 that  $V(\pi_{norev}^*, (1, 1)) < V^*(\pi_{norev}^*)$ . The fact that  $\pi^* \leq \pi_{norev}^*$ , taken together with the fact that  $V^*$  is non-increasing in  $\pi$  (see Lemma 4), implies that  $V^*(\pi_{norev}^*) \leq V^*(\pi^*)$ . Thus,

the Voter's current-period policy payoff with review,  $V^*(\pi^*)$ , is strictly greater than that with no review,  $V(\pi_{norev}^*, (1, 1))$ .

Proof of part (c). Suppose judicial review induces a non-passive equilibrium in which  $\pi^* > \pi_{norev}^*$ . We provide two examples: one in which judicial review strictly decreases the Voter's current-period policy payoff and one in which review strictly increases the Voter's current-period policy payoff. Consider a parameterization of our model in which  $\alpha = .2$ ,  $q = .5$ ,  $p = .8$ ,  $F(\hat{q}) = \hat{q}$ , and  $\gamma = .701$ . Then,  $\pi_{norev}^* \approx .1195$ . With review, the unique equilibrium is active, where  $\pi_{act}^* \approx .1517$ . Thus, the Voter's current-period policy payoff *without review* is  $V(.1195, (1, 1)) \approx .8642$ , whereas the Voter's current-period policy payoff *with review* is  $V(.1517, (0, 1)) \approx .8625$ . Consequently, in this example, the introduction of judicial review strictly decreases the Voter's current policy payoff. Now consider a parameterization in which  $\alpha = .2$ ,  $q = .5$ ,  $p = .8$ ,  $F(\hat{q}) = \hat{q}$ , and  $\gamma = .781$ . Then,  $\pi_{norev}^* \approx .1195$ . With review, the unique equilibrium is active, where  $\pi_{act}^* \approx .1300$ . Thus, the Voter's current-period policy payoff *without review* is  $V(.1195, (1, 1)) \approx .8642$ , whereas the Voter's current-period policy payoff *with review* is  $V(.1517, (0, 1)) \approx .8769$ . Thus, in this example, the introduction of judicial review strictly increases the Voter's current policy payoff. ■

## Robustness

We assess the robustness of our equilibrium results by relaxing two of the key simplifying assumptions invoked in the main text: (1) that the Judge always upholds when  $a = n$ ; and (2) that the high-ability Leader matches policy to the state (i.e., selects  $a = \omega$ ).

Consider first the assumption that the Judge always upholds the normal action. Even if we relax this assumption, the Judge would never strike down the normal action in equilibrium. The assumptions that  $\gamma < p$  and  $p > \frac{1}{2}$  imply that for any signal  $s \in \{n, x\}$  and any strategy  $\pi$  of the low-ability Leader,  $Pr(\omega = n | a = n, s) > \frac{1}{2}$ , so upholding upon observing  $a = n$  is optimal for the Judge. Thus, while our assumption that only the normal action is justiciable simplified the exposition, all our equilibrium results would be the same if we relaxed that assumption.

Consider next the assumption that the high-ability Leader chooses  $a = \omega$ . Even if we relax this assumption, it is optimal for the high-ability Leader to choose  $a = \omega$  so long as the Voter expects

him to do so. If the Voter expects the high-ability Leader to choose  $a = \omega$ , then equilibrium behavior on the part of the low-ability Leader involves always selecting  $a = n$ . Given that the high-ability Leader has a greater incentive than the low-ability Leader to focus on the policy consequences of his actions, when the low-ability Leader finds it optimal to select  $a = n$ , then, when  $\omega = n$ , so to will the high-ability Leader. Alternatively, when  $\omega = x$ , by selecting  $a = x$ , the high-ability Leader maximizes both his policy payoff and his probability of reelection.

Next, suppose that when the Voter expects the high-ability to choose  $a = \omega$ , the low-ability Leader in equilibrium mixes between  $a = n$  and  $a = x$ . Since the low-ability Leader is indifferent between  $a = n$  and  $a = x$ , if the Judge is using a strict strategy, the probability of reelection from proposing  $a = x$  must be equal to that of  $a = n$ , and if the Judge is using a non-strict strategy, the low-ability Leader's probability of reelection must be greater when he proposes  $a = x$ . Thus, when the Judge's strategy is strict, the high-ability Leader has no incentive to choose  $a \neq \omega$ . If the Judge's strategy is passive, the high-ability Leader's respective probabilities of reelection from proposing  $a = n$  and  $a = x$  are identical to that of the low-ability Leader; because policy considerations weigh more on the high-ability Leader, the high-ability Leader has a strict incentive to choose  $a = \omega$ . Finally, if the Judge's strategy is either semi-strict, active, or semi-active, the high-ability Leader's probability of reelection when he proposes  $a = n$  is identical to that of the low-ability Leader, and his probability of reelection from proposing  $a = x$  when  $\omega = x$  ( $\omega = n$ ) is strictly greater (less) than the low-ability Leader's probability of reelection from proposing  $a = x$ .<sup>33</sup> Hence, once again the high-ability Leader has no incentive to choose  $a \neq \omega$ .<sup>34</sup>

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<sup>33</sup>This is a consequence of two facts: First, the Leader's reputation is better when upheld than when overruled. Second, let  $z$  denote the probability the low-ability Leader is upheld when  $a = x$ . The probability the high-ability Leader is upheld when he proposes  $a = x$  and  $\omega = x$  is greater than  $z$ , whereas the probability the low-ability Leader is upheld when  $a = x$  and  $\omega = n$  is less than  $z$ .

<sup>34</sup>We note for the sake of completeness that equilibria to our model in which the high-ability Leader chooses  $a \neq \omega$  do exist, though such equilibria are never unique. For instance, when  $\alpha$  is sufficiently small, there may be an equilibrium in which both the high- and low-ability Leader always propose  $a = n$  and the Voter believes that any Leader who proposes  $a = x$  must be low ability.

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