Does Informative Media Commentary Reduce Politicians' Incentives to Pander?[*]

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Abstract

Elections sometimes give policy-makers incentives to pander, i.e., to implement a policy that voters think is in their best interest, even though the policy-maker knows that a different policy is actually better for the voter. Pandering incentives are typically attenuated when voters learn, prior to the election, whether the policy chosen by the incumbent truly was in their best interest. This suggests that the media can improve accountability by reporting to voters information about the whether an incumbent made good policy choices. We show that, while media monitoring does sometimes eliminate the incumbent's incentive to pander, in other cases it makes the problem of pandering worse. Furthermore, in some circumstances incumbent incentives are better when the media acts as a "yes man" – suppressing some information that indicates the policy-maker made the wrong choice. We explain these seemingly paradoxical outcomes by focusing on how media commentary affects voters' tendency to apply an asymmetric burden of proof to the incumbent, based on whether she pursues popular or unpopular policies.

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> I am persuaded myself that the good sense of the people will always be found to be the best army. They may be led astray for a moment, but will soon correct themselves. The people are the only censors of their governors: and even their errors will tend to keep these to the true principles of their institution. To punish these errors too severely would be to suppress the only safeguard of the public liberty. The way to prevent these irregular interpositions of the people is to give them full information of their affairs thro' the channel of the public papers, & to contrive that those papers should penetrate the whole mass of the people. The basis of our governments being the opinion of the people, the very first object should be to keep that right; and were it left to me to decide whether we should have a government without newspapers or newspapers without a government, I should not hesitate a moment to prefer the latter.
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> Thomas Jefferson, 1787 letter to Edward Carrington

How does the media contribute to democracy? Jefferson suggests one possible, and important, role – to educate the people about the merits of particular policy choices. When politicians are accountable to voters, the public must be well-informed, lest the government respond to mistaken voter impulses. Thus, Jefferson argues, the media plays a crucial role in the functioning of a democracy.

We develop a formal model to analyze this claim. In the model, politicians are accountable to voters, voters who are potentially misinformed about their true interests; in Jefferson's terms "the opinion of the people" may not be right. The incumbent policymaker has better information about optimal policy choices than voters do, and thus may have an incentive to *pander* – to implement a policy that voters *think* is in their best interest, even though her superior information indicates that the voters are wrong about their best interest (Canes-Wrone, Herron, and Shotts 2001; Maskin and Tirole 2004; Prat 2005).

We start with a baseline model, in which no media is present, and then compare that model's predictions to the predictions of two variants with a media. In each variant, the media has private information about which policy best serves voters' interests. The media is a commentator, making statements about which policy choice is correct. The variants differ only in the timing of the media's commentary. In the first, the media comments simultaneously with the incumbent's policy choice. In the second, the media gets to observe the policy choice before commenting; this timing means that, if the media sees a weak signal indicating that the incumbent chose the wrong policy, it might act as a yes-man, herding on the incumbent's choice (Bikhchandani, Hirshleifer, and Welch 1992; Sharfstein and Stein 1990).[1] In both variants, the media comments before the next election and is thus relevant for voters' decision about retaining or replacing the incumbent. The media thus helps hold incumbents accountable for their actions, and the prospect of media commentary can potentially discipline an electorally-motivated incumbent's policy choice.

Our key question is: how does the existence of the media affect the incumbent politician's incentives to pander?[2] Building on Jefferson's intuition, we might think that, because the media gives voters information about whether the policy chosen by an incumbent was truly in their best interest, politicians will have less incentive to pander in the presence of a media. After all, if, at the time of the next election, voters will be perfectly informed about whether the incumbent's policy choice promoted their interests, then the incumbent has no incentive to pander (Canes-Wrone, Herron, and Shotts 2001). So a reasonable conjecture is that an informative, though sometimes mistaken, media will improve accountability by reducing pandering.

Both the simultaneous and sequential variants of our model partially confirm the Jeffersonian intuition; in some circumstances, introducing a media commentator eliminates pandering. But the

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[1] Although the details of imitation in our model differ from those in Pendergast (1993), the underlying intuition of conformity is similar.

[2] Although, as far as we know, there is no formal model that analyzes the question of whether the presence of a media reduces politicians' incentives to pander, there has been some formal work on other aspects of accountability. Besley and Prat (2006) analyze whether the media can discipline kleptocratic government officials. Egorov, Guriev, and Sonin (2007) analyze the tradeoffs facing an autocrat who can use a free media to acquire information about bureaucrats' performance but is concerned that the media might instigate a revolution by informing voters that he himself has performed badly.

media does not always eliminate pandering and, in fact, introducing a media can lead to pandering when it would not have occurred without a media. Furthermore, there are circumstances where a yes man media is *more* effective than a truthful media in reducing pandering.

To understand the Jeffersonian intuition's failure, it helps to take a closer look at the basic pandering incentive when there is no media. The key driver of pandering is that, when the incumbent and the challenger are close in terms of their prior reputations, voters treat the incumbent's possible policy choices *asymmetrically.* They reelect an incumbent who chose a popular action unless she is proved wrong, but they only reelect an incumbent who chose an unpopular action if she is proved correct. This asymmetric "burden of proof" creates the incentive for pandering – if the public is sufficiently unlikely to learn whether the incumbent's policy choice was correct, then choosing the action with a lower burden of proof is optimal, even when that action is unlikely to be correct.

The media can eliminate pandering by inducing the voter to treat initially-popular and initially-unpopular actions symmetrically. If the incumbent and challenger are sufficiently close in terms of their reputations, the incumbent is reelected only if her action is somehow confirmed, either by clear, publicly observable information indicating that she indeed chose the correct policy or, in the absence of such public information, by media commentary supporting the incumbent's action. The two actions thus lead to the same burden of proof, and there is no incentive to pander.

However, if the incumbent's reputation is moderately above or moderately below the challenger's reputation, then the media actually breaks the symmetry in burden of proof. When the incumbent has a lead, for example, the voters trust her enough to reelect even if she chooses the unpopular action and no public information arrives. But a contradictory report by the media leads the voters to oust an incumbent who chose the unpopular action, while a similarly contradictory report would not lead to a defeat for an incumbent who chose the popular action. Thus the asymmetric burden of proof, and pandering, return.

Focusing on asymmetric voter responses also helps explain the potential benefit of a yes-man media, one that is unwilling to criticize the incumbent unless it observes overwhelmingly clear information indicating that the incumbent chose the wrong policy. When the media is a yes-man, its contradictory reports are definitive, i.e., voters know that the media only criticizes the incumbent when it is sure she chose the wrong policy. No incumbent can win in the face of such a challenge. But the asymmetric burden of proof for moderately leading incumbents in the simultaneous media case arose precisely because voters gave the incumbent the benefit of the doubt when the media disagreed with the ex-ante popular action. This never happens with a yes-man media, so under some circumstances a yes-man media is extremely effective at reducing pandering.

While pandering is a response to asymmetric voter responses, it is important to note that, in our model, the media treats both the candidates and the incumbent's actions symmetrically. This may seem strange given the extant literature's focus on media bias, both in studies that empirically estimate bias (Groseclose and Milyo 2005, Ho and Quinn 2007, Gentzkow and Shapiro 2007) and in studies that examining its origins and relationship to competition in the media industry (Page 1996, Arnold 2004, Baron 2004, Gentzkow and Shapiro 2006). In the analysis that follows we will set aside all issues related to bias and competition, i.e., we analyze a model with a single, unbiased, media outlet. We do so not because we find bias and competition uninteresting; on the contrary, we think these issues are quite important. However, for the purpose of our analysis it is important to use a best case model, in which the media is a pure provider of information. Ultimately, our goal is to assess a simple and seemingly compelling intuition – that by providing information the media reduces incentives for pandering. Our most surprising results have to do with the fact that this intuition often fails, for reasons independent of bias. Even in the best-case scenario, with an unbiased media, the presence of the media does not necessarily eliminate pandering, and indeed it can sometimes aggravate the problem.

The paper proceeds as follows. We first introduce the model, then present a set of common results that hold in all three variants of the model: the no-media baseline, simultaneous media announcements, and sequential announcements. Next, we examine each of the variants in more detail, and analyze how the media affects incentives for pandering. We then briefly discuss how the media affects voters' ability to select high quality incumbents, and conclude.

The Model

We want to identify the impact of the media's announcement on the incumbent's incentives to take the correct action in the first period. To isolate the media's impact, we start with a baseline model *without* a media, using a simplified variant of the model in Canes-Wrone, Herron, and Shotts (2001). The heart of our analysis modifies this baseline model, adding a commentator to explore the media's effect on politicians' incentives to pander.

A Baseline Model

Policies and Preferences In each of two periods, a policy must be selected from the set $\{A, B\}$. The optimal policy in a period depends on the state of the world in that period, $\omega \in \{A, B\}$. A representative voter gets payoff 1 for each period in which the policy matches the state, and 0 for each period in which policy does not match the state. The state of the world is independent across the two periods, and in each period state A is more likely: $\Pr(\omega = A) \equiv \pi > 1/2$. We do not introduce additional notation to distinguish the two periods, since almost all of the action in the model occurs in the first period. There is no discounting.

In period 1, an incumbent policy-maker chooses policy $x_I \in \{A, B\}$. At the end of this period, the voter can either reelect the incumbent or replace her with a challenger. A politician gets payoff $\alpha > 0$ for matching her policy choice to the state, plus an ego rent of 1 for each period that she holds office.[3]

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[3] Politicians do not care about policy when they are not in office. This ensures that a low-quality incumbent does not want to lose office in the hopes of being replaced by a higher-quality official.

Information Structure At the beginning of each period, the voter has no information about the state, aside from the prior; the policy maker, on the other hand, gets an informative private signal, s, about the state. This signal's precision depends on her type, $\theta \in \{H, L\}$. A high-quality type learns the true state:

$$\Pr(s = \omega \mid \theta = H) = 1,$$

while a low-quality type gets an imperfect signal:

$$\Pr(s = \omega \mid \theta = L) = q > \pi.$$

By Bayes's rule,

$$\Pr(\omega = B \mid s = B, \theta = L) = \frac{(1-\pi)\,q}{(1-\pi)\,q + \pi\,(1-q)} > \frac{1}{2},$$

so the restriction that $q > \pi$ ensures that even a low-type's signal outweighs the prior. Types are private information. The prior probabilities for each candidate (incumbent and challenger) being high-quality are:

$$\begin{aligned} \Pr(\theta_I = H) &= \kappa_I \\ \Pr(\theta_C = H) &= \kappa_C \end{aligned}$$

We say that the election is *competitive* if κ_I and κ_C are close together.

With probability ρ, the voter learns the true first-period state before election day; otherwise he votes knowing only the policy choice, x_I. Formally, the voter's signal is $s_V \in \{A, B, \phi\}$, where ϕ means "no information". If uncertainty resolves then $s_V = \omega$. A low ρ means that either the election is imminent – so there is little time for information to be publicly revealed – or that the policy being chosen is unlikely to produce any easily assessed short-run effects.

Adding the Media

The heart of the paper adds a media commentator to the baseline model. The commentator makes an announcement x_M, declaring which state of the world he believes is more likely. The media maximizes

s_M	$\Pr(s_M \mid \omega = A)$	$\Pr(s_M \mid \omega = B)$
A_H	κ_M	0
A_L	$q(1-\kappa_M)$	$(1-q)(1-\kappa_M)$
B_L	$(1-q)(1-\kappa_M)$	$q(1-\kappa_M)$
B_H	0	κ_M

Table 1: Likelihoods of the media's signals in the two states.

the probability that its announcement matches the true state, i.e., it is intrinsically motivated to give the voter its best assessment of the state.[4]

The media bases its belief about the true state on the prior and a private signal, $s_M \in \{A_H, A_L, B_L, B_H\}$. The signal likelihoods are given in Table 1. This information structure is, in some ways, similar to that of the incumbent. A signal is characterized by both the state is indicates is more likely and by how precise it is. Signals subscripted by H perfectly reveal the state, while those subscripted by L are correct only with conditional probability q. The probability of a perfectly revealing signal is κ_M.

There is, however, a crucial difference between the media and the incumbent: the media has only one type, and may receive a signal of either precision. Substantively, this just reflects the media's inability to fully convey to voters all of the subtleties of its information. It is important for our analysis that the set of signals the media might receive is richer than the set of messages it can send – this is what makes partial yes man behavior possible.

We consider two variants of the model with a media: in the *simultaneous* variant, the media makes its announcement at the same time that the incumbent chooses policy, whereas in the *sequential*

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[4] Gentzkow and Shapiro (2006) suggest a different possible model of media motivations, in which the media is concerned about potential customers' beliefs about its quality. Given that our primary focus is on the effects of media behavior, rather than the media behavior itself, we use the simpler assumption that the media is motivated by a desire to report the truth.

variant, the media's announcement is made after the incumbent has chosen policy. The latter variant, with sequential communication, is perhaps more interesting substantively, since we typically think of the media observing and then commenting on the incumbent's policy decisions. But considering both timings for the media announcement helps isolate the causal mechanisms through which the media changes incentives. With simultaneous communication, the media's announcement changes the model only by providing an additional, imperfect, public signal about the state. With sequential communication, the media can herd on the incumbent's choice, acting as a *yes man.* Considering these cases separately lets us isolate the effect of yes-man behavior.[5]

Equilibrium Concept

We focus on *perfect accountability* equilibria, that is, perfect Bayesian equilibria in which the incumbent matches her action to her signal. Such an equilibrium has the normatively desirable property that the incumbent uses her information optimally to promote the voter's policy interests. With this focus, we can sharpen our main question: does the presence of a commentator make the existence of a perfect accountability equilibrium more or less likely? And how does the existence of a perfect accountability equilibrium depend on factors such as the competitiveness of the election ($|\kappa_I - \kappa_C|$) and the probability that uncertainty resolves (ρ)?

When no perfect accountability equilibrium exists, there will be a *pandering* equilibria, in which a low quality incumbent sometimes chooses an action that matches voters' prior beliefs about the correct policy, but that does not promote their interests. We characterize such equilibria in the Appendix for referees.

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[5] Another interpretation of the equilibrium with simultaneous communication is that communication is sequential but the media is *nonstrategic*, in the sense that it is duty-bound to announce its signal without trying to learn from the policy choice and the incumbent's equilibrium strategy.

Results Common to All Variants

Before characterizing perfect accountability equilibria in the different variants of our model, we provide some results that are useful in all three cases.

Second Period Policy and Continuation Values

As usual, we start solving the game from the end. Because the second period is identical in each model, we give a unified treatment here.

As there are no subsequent periods, the period 2 policy-maker is concerned only with the immediate impact of her policy choice. She gets utility $\alpha > 0$ from matching the state and zero otherwise, and $q > \pi$, so she will choose the policy corresponding to the state that her signal indicates is more likely. Thus, in the second period, the policy-maker has a dominant strategy to follow her signal.

With this second-period strategy in hand, the optimal election rule is easy to derive. The voter wants second-period policy to match the state. And he knows that whoever he elects will follow her signal in the second period. Thus the voter elects whichever candidate he believes is more likely to be a high quality type. Writing $\mu(h)$ for the voter's assessment of the probability that the incumbent is a high type given history h, the optimal election rule is:

$$\text{reelect the incumbent if and only if } \mu(h) \geq \kappa_C$$

where κ_C is the probability that the challenger is high quality.[6]

Given voter behavior and second period concerns, we can derive an expression for the incumbent's indirect payoff function for period 1. She gets an immediate payoff of α if she picks the correct policy, $x_I = \omega$, in period 1. In addition, she gets a positive payoff if she is re-elected:

$$v(\theta) \equiv 1 + \left(\mathbb{I}[\theta_I = H] + q\mathbb{I}[\theta_I = L]\right)\alpha, \tag{1}$$

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[6] To be precise if $\mu(h) > \kappa_C$ the voter must re-elect, if $\mu(h) < \kappa_C$ the voter must remove the incumbent, and if $\mu(h) = \kappa_C$ the voter is indifferent. Perfect accountability equilibria involve pure strategies for other actors so only for knife-edge parameter values will it be the case that $\mu(h) = \kappa_C$.

where $\mathbb{I}[p]$ is the indicator function for the proposition p. The first term in the expression, 1, is the direct payoff from holding office, while the second reflects the probability that the incumbent will choose the right action if she is reelected. Note that the second term depends on the incumbent's type.

An incumbent with type θ_I who sees signal s_I in period 1 thus chooses policy x_I to solve:

$$\max_{x_I \in \{A,B\}} \quad \alpha \Pr(x_I = \omega \mid s_I) + v(\theta) \Pr[\mu(h) \geq \kappa_C \mid x_I, s_I].$$

The first term is the incumbent's direct payoff from her first period policy choice, while the second term is her payoff from reelection weighted by the probability of reelection conditional on her signal and policy choice.

Simplifying voter beliefs

The incumbent's reelection chances depend on the voter's beliefs about her type, giving these beliefs, especially the posterior $\mu(h)$, a central role in the analysis. Particularly in cases with media commentary, it can be complicated to directly calculate this probability, depending, as it does, on the media's strategy, the incumbent's strategy, and their realized actions. Fortunately, focusing on perfect accountability equilibria lets us substantially simplify these calculations.

Updating is particularly easy when uncertainty resolves, so the voter observes the true state, $s_V = \omega$. In this case, the voter knows for sure whether the incumbent's policy choice was correct. If the incumbent chose the wrong policy, then the voter's conjecture that the incumbent follows her signal and the fact that only the low type can get a wrong signal combine to imply that the probability the incumbent is high quality is 0. If the incumbent chose the correct policy, on the other hand, then the voter knows that $s_I = \omega$. There are two ways this can happen: the incumbent is high quality or she is low quality and got the right signal. Thus Bayes's rule gives the voter's belief about the probability that the incumbent is high quality as

$$\overline{\mu} \equiv \frac{\kappa_I}{\kappa_I + q(1-\kappa_I)}.$$

What if the voter does not observe the true state? Since high ability types never make mistakes we can write the posterior in a simple form. (The proof is in the Appendix.)

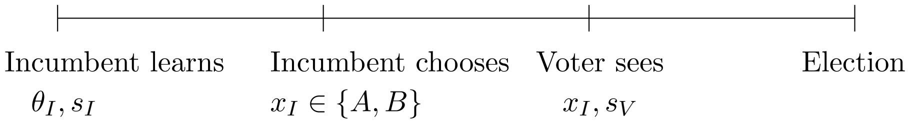
Lemma 1 *Assume that the incumbent matches her action to her signal. Then*

$$\mu(h) = \Pr(\omega = x_I \mid h)\overline{\mu}.$$

Intuitively, the voter first revises his beliefs about the true state of the world, and then uses those beliefs about the state as weights to form beliefs about the incumbent's type as a weighted average of the best case (the incumbent is know to be correct) and the worst case (the incumbent is known to be wrong).

The Baseline Model

We can now analyze the incumbent's policy choice in the first period of our baseline model. In this baseline, recall, there is no media, so the timing is:



We follow a simple procedure to characterize perfect accountability equilibria for each variant of our model. First we assume that the incumbent follows her signal, and calculate the voter's posterior beliefs. We then use these posterior beliefs to determine the voter's optimal reelection rule given his information at election time. Finally, we determine whether the incumbent actually prefers to follow her signal, given voter behavior.

Updating Recall that $\mu(h)$ is the voter's assessment of the probability that the incumbent is high quality, given history h. In the baseline model, h is just (x_I, s_V), so we write $\overline{\mu}(x_I, s_V)$ for the posterior given first-period policy x_I, public signal s_V, and the (perfect accountability) equilibrium conjecture that the incumbent chooses $x_I = s_I$. Lemma 1 lets us calculate these posteriors for every history that the voter might observe. For our purposes, the key aspect of these posteriors is their ordinal ranking. This is given as:

Lemma 2 *In the baseline model,*

$$0 = \overline{\mu}(A, B) = \overline{\mu}(B, A) < \overline{\mu}(B, \phi) < \overline{\mu}(A, \phi) < \overline{\mu}(A, A) = \overline{\mu}(B, B) < 1.$$

Proof The beliefs about the state follow from a straightforward application of Bayes's Rule. The only nontrivial part is the inequality $\overline{\mu}(B, \phi) < \overline{\mu}(A, \phi)$. By Lemma 1, this inequality is equivalent to

$$\Pr(\omega = B \mid x_I = B) < \Pr(\omega = A \mid x_I = A)$$

where

$$\Pr(\omega = B \mid x_I = B) = \frac{(1-\pi)[\kappa_I + q(1-\kappa_I)]}{(1-\pi)[\kappa_I + q(1-\kappa_I)] + \pi(1-q)(1-\kappa_I)}$$

and

$$\Pr(\omega = A \mid x_I = A) = \frac{\pi[\kappa_I + q(1-\kappa_I)]}{\pi[\kappa_I + q(1-\kappa_I)] + (1-\pi)\,(1-q)(1-\kappa_I)}.$$

Substituting and simplifying, the inequality reduces to

$$\frac{1}{1 + \frac{(1-q)(1-\kappa_I)}{[\kappa_I + q(1-\kappa_I)]}\frac{\pi}{(1-\pi)}} < \frac{1}{1 + \frac{(1-q)(1-\kappa_I)}{[\kappa_I + q(1-\kappa_I)]}\frac{(1-\pi)}{\pi}}$$

which is holds because $\pi > 1/2$. □

As in several other recent papers (Canes-Wrone, Herron, and Shotts 2001; Gentzkow and Shapiro 2006; Prat 2005), the inequality $\overline{\mu}(B, \phi) < \overline{\mu}(A, \phi)$ creates incentives for pandering – i.e., an incumbent choosing a policy that voters believe is optimal even though the incumbent has information indicating that it is not. To see this, consider a low-quality incumbent who observes signal $s_I = B$. Because $q > \pi$, even the low quality incumbent's signal outweighs the prior, so, unlike the voters, she believes that $x_I = B$ is the correct policy. But if uncertainty does not resolve ($s_V = \phi$), then policy B leads voters to draw an adverse inference about her quality. If the challenger's reputation falls within the gap between $\mu(B, \phi)$ and $\mu(A, \phi)$, then the voter applies higher burden of proof to an incumbent who chooses the ex-ante unpopular action B than to an incumbent who chooses A. This asymmetric burden of proof can lead to pandering.

Figure 1 summarizes conditions under which a perfect accountability equilibrium exists, depending on the parameters of the model. The challenger's probability of being high quality, κ_C, is plotted on the horizontal axis, while the probability of uncertainty resolution, ρ, is plotted on the vertical axis. Lemma 2 divides the horizontal axis into several regions, in each of which the voter uses a different election rule in any perfect accountability equilibrium. We next derive those rules and find out if the incumbent will actually follow her signal given those rules.

Reelection and policy choice Lemma 2 gives us four cases to consider.

Consider first a challenger who is well ahead of the incumbent: $\kappa_C > \overline{\mu}(A, A)$. Because the voter elects the candidate who is more likely to be high quality, the incumbent can never win in this region, and her payoff is affected only by the policy choice in the first period. Given this, she strictly prefers to follow her signal.

If the challenger is strong but not too strong, i.e., $\kappa_C \in (\overline{\mu}(A, \phi), \overline{\mu}(A, A))$, then the incumbent wins only if uncertainty resolves and her choice was correct. Because the event of uncertainty resolution is independent of her action and signal, she has an electoral incentive to choose the policy that she thinks is most likely correct. Because her signal is informative, she has a strict incentive to follow her signal, setting $x_I = s_I$. Together, these arguments show that there is a perfect accountability equilibrium in region 3 of Figure 1.

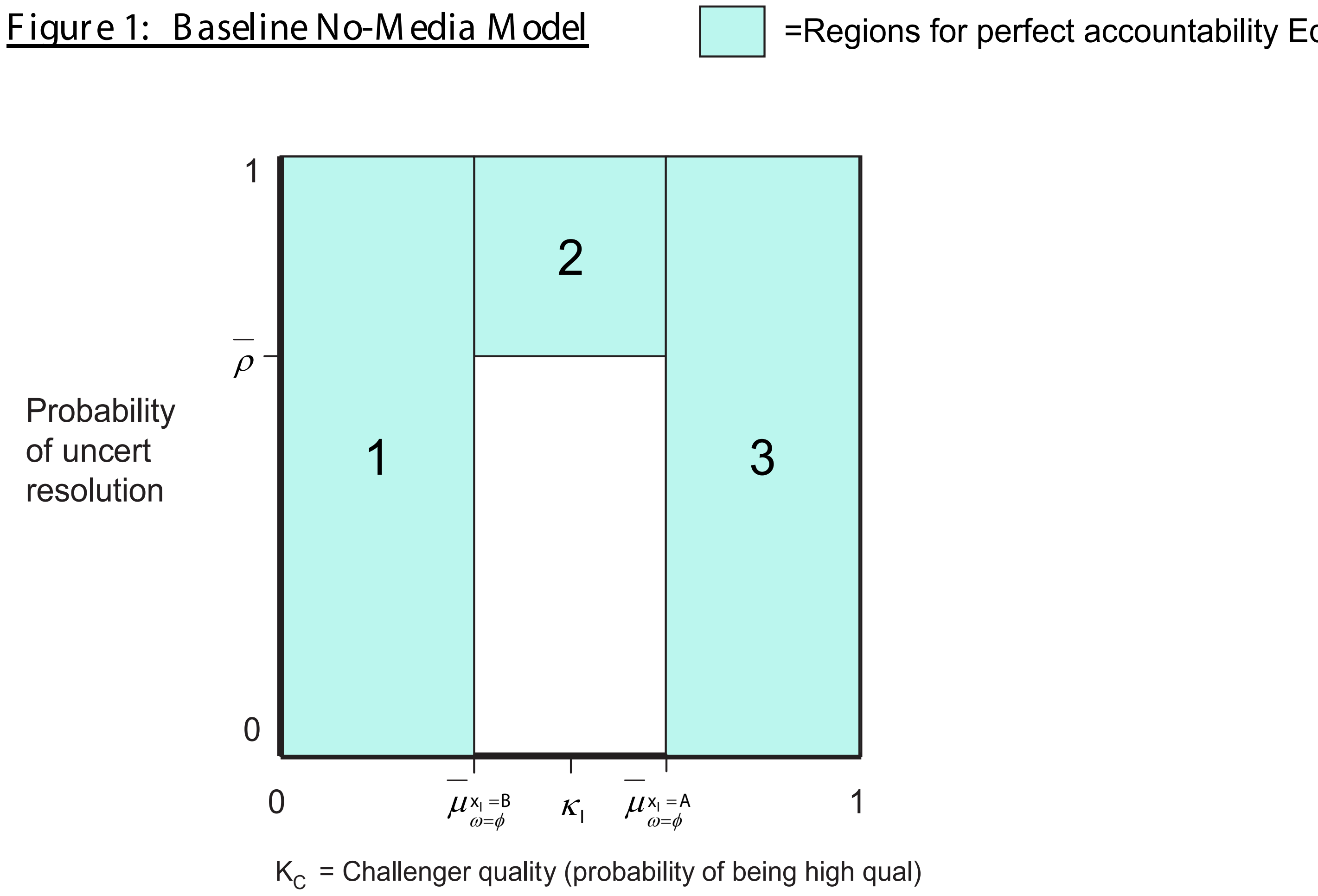


Figure 1: Shaded areas represent parameter values that support a perfect accountability equilibrium.

The case of a weak challenger, $\kappa_C \leq \overline{\mu}(B, \phi)$, is also straightforward. The incumbent wins re-election unless uncertainty resolves and her choice was wrong. Again, the incumbent's incentive to win just gives her an additional reason to match her action to her signal, and there is a perfect accountability equilibrium in region 3 of Figure 1.

Most interesting is the case of closely matched candidates: $\kappa_C \in (\overline{\mu}(B, \phi), \overline{\mu}(A, \phi))$. If uncertainty resolves, the incumbent wins re-election if and only if her choice was correct. If uncertainty does not resolve, she wins if and only if she chose $x_I = A$. How do these electoral incentives affect the incumbent's policy choice?

The total payoff for an incumbent who chooses A is

$$\alpha \Pr(\omega = A \mid s_I) + v(\theta)\left(1 - \rho + \rho \Pr(\omega = A \mid s_I)\right).$$

If she chooses B, on the other hand, her total payoff is

$$\alpha \Pr(\omega = B \mid s_I) + v(\theta)\rho \Pr(\omega = B \mid s_I).$$

Choosing A is optimal if and only if

$$v(\theta)(1-\rho) + (\alpha + v(\theta)\rho)\left(\Pr(\omega = A \mid s_I) - \Pr(\omega = B \mid s_I)\right) \geq 0. \tag{2}$$

If $s_I = A$, then the difference $(\Pr(\omega = A \mid s_I) - \Pr(\omega = B \mid s_I))$ is positive, and $x_I = A$ is optimal. So an incumbent who sees $s_I = A$ definitely wants to follow her signal.

If $s_I = B$, which policy is best depends on the strength of this signal, which in turn depends on whether the incumbent is high quality. A high quality incumbent is more confident than is a low quality one that B is the correct choice in this situation. This suggests the following useful result, which implies that we only need to focus on optimal behavior for low-quality incumbents.

Lemma 3 *In the baseline model, for any parameters at which a low quality incumbent wants to follow a B signal, a high quality incumbent also wants to follow a B signal.*

(Proof in the Appendix.)

Thus the key to supporting a perfect accountability equilibrium is that a low quality incumbent who sees signal B wants to follow her signal. Writing

$$\lambda_B \equiv \Pr(\omega = A \mid s_I = B, \theta_I = L) = \frac{\pi\,(1-q)}{\pi\,(1-q) + (1-\pi)q} < 1/2, \tag{3}$$

the incumbent will follow her signal and play $x_I = B$ if

$$v(L)(1-\rho) - (\alpha + v(L)\rho) + 2\lambda_B(\alpha + v(L)\rho) \leq 0,$$

i.e.,

$$\rho \geq \frac{\alpha(2\lambda_B - 1) + v(L)}{2v(L)(1-\lambda_B)} \equiv \overline{\rho}. \tag{4}$$

For α not too big, this cutpoint $\overline{\rho}$ is strictly greater than zero.[7]

The intuition is straightforward. In this region the incumbent and the challenger have similar prior probabilities of being high quality. Thus, given that the voter updates positively about the incumbent after she chooses A and negatively when she chooses B, the incumbent knows she faces an asymmetric burden of proof that she must satisfy in order to be re-elected, and she has an incentive to choose A. However, if the probability of uncertainty resolution is sufficiently high, then she will win re-election if and only if she chose the correct policy so for $\rho > \bar{\rho}$ there exists a perfect accountability equilibrium.

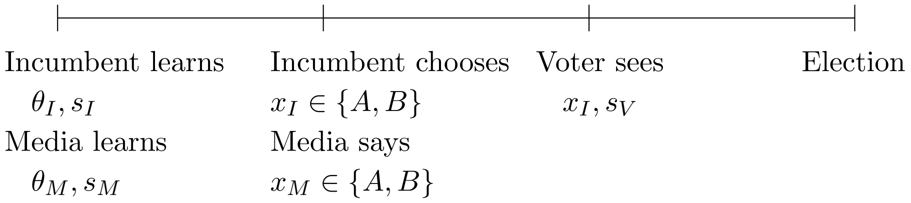
We have proved:

Proposition 1 *In the baseline model, there is a perfect accountability equilibrium if at least one of the following conditions holds:*

1. $\kappa_C < \overline{\mu}(B, \phi)$, *i.e., challenger reputation is worse than incumbent who chooses* $x_I = B$.
2. $\kappa_C \geq \overline{\mu}(A, \phi)$, *i.e., challenger reputation is better than incumbent who chooses* $x_I = A$.
3. $\rho \geq \overline{\rho}$, *i.e., uncertainty resolution is likely.*

Simultaneous Media Announcements

Now we introduce the media, letting it make an announcement without observing the incumbent's action. The timing is:



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[7] If $\alpha \geq \frac{1}{2\lambda_B - 1 + q}$ then $\bar{\rho} < 0$ and there always exists a perfect accountability equilibrium.

Media Behavior The media maximizes the probability its announcement is correct. Let $\lambda_M(s_M)$ be the media's posterior probability that the state is A. Because $q > \pi$, even the low precision signal outweighs the prior:

$$\lambda_M(B_L) < \frac{1}{2} < \lambda_M(A_L).$$

Thus the media always announces the state its signal says is more likely: $x_M = A$ if and only if $s_M = A_H$ or A_L. The probability that the media's announcement matches the state, unconditional on its type, is then

$$q^M \equiv \kappa_M + (1 - \kappa_M)q.$$

Updating As before, $\mu(h)$ is the voter's assessment of the probability that the incumbent is high quality, given history h. With a media announcement, h is a triple (x_I, x_M, s_V); we use $\tilde{\mu}(x_I, x_M, s_V)$ to denote the voters's posterior given first-period policy x_I, media announcement x_M, and public signal s_V (always under the conjecture that there is a perfect accountability equilibrium, so $x_I = s_I$).

Lemma 1 lets us calculate these posteriors for every history that the voter might observe. For our purposes, the key aspect of these posteriors is their ordinal ranking. The salient aspect of these posteriors is again their ranking.

Lemma 4 *With simultaneous media announcement,*

$$\begin{aligned} 0 = \tilde{\mu}(A, x_M, B) = \tilde{\mu}(B, x_M, A) < \tilde{\mu}(B, A, \phi) < \tilde{\mu}(A, B, \phi) \\ < \ \tilde{\mu}(B, B, \phi) < \tilde{\mu}(A, A, \phi) < \tilde{\mu}(A, x_M, A) = \tilde{\mu}(B, x_M, B) < 1. \end{aligned}$$

The Lemma follows straightforwardly from Bayes's Rule. The key inequalities generating pandering incentives are $\tilde{\mu}(B, A, \phi) < \tilde{\mu}(A, B, \phi)$ and $\tilde{\mu}(B, B, \phi) < \tilde{\mu}(A, A, \phi)$.). Both have a simple intuition. Suppose that the media disagrees with the incumbent's policy choice, and that the voter does not learn the true state of the world. The observations $(x_I = A, x_M = B)$ and $(x_I = B, x_M = A)$, have the same likelihoods, so the voter's prior belief that A is the more likely state of the world implies that he has more confidence that the incumbent was correct if she choose A. Similarly, if the media announcement agrees with the incumbent's choice, the incumbent is more likely to be high quality if this policy agrees with the prior, so $\tilde{\mu}(B, B, \phi) < \tilde{\mu}(A, A, \phi)$.

Figure 2 illustrated the conditions under which a perfect accountability equilibrium exists, depending on the parameters of the model. The challenger's probability of being high quality, κ_C, is plotted on the horizontal axis, while the probability of uncertainty resolution, ρ, is plotted on the vertical axis. Lemma 4 divides the horizontal axis into several regions, in each of which the voter uses a different election rule in any perfect accountability equilibrium. We next derive those rules and find out if the incumbent will actually follow her signal given those rules.

To explain the pattern of perfect accountability equilibria in Figure 2, we derive the voters's optimal behavior given that the incumbent follows her signal, and determine whether it is actually optimal for the incumbent to follow her signal given that voter behavior.

Reelection and policy choice Lemma 4 gives us six cases to consider.

If the challenger is either very strong or very weak, then the situation is similar to the case without a media commentator. If the challenger is weak enough, $\kappa_C \leq \tilde{\mu}(B, A, \phi)$, then the incumbent wins unless the public signal reveals that her choice was wrong. Choosing the policy that matches her signal minimizes the chance of a policy mistake, so she has an electoral incentive to choose $x_I = s_I$, and there is a perfect accountability equilibrium in region 1 of Figure 2. Similarly, if $\kappa_C \in (\tilde{\mu}(A, A, \phi), \tilde{\mu}(A, x_M, A))$, then the incumbent wins only if uncertainty resolves and her choice was correct. And if $\tilde{\mu}(A, x_M, A) < \kappa_C$, the incumbent can never win. Thus, if the challenger is strong enough, there is a perfect accountability equilibrium.

The media plays a real role for more moderate challenger reputations. Consider first a relatively evenly matched race, $\kappa_C \in (\tilde{\mu}(A, B, \phi), \tilde{\mu}(B, B, \phi))$. The incumbent wins if uncertainty resolves and her choice was correct, or if uncertainty does not resolve and the media agrees with the policy choice.

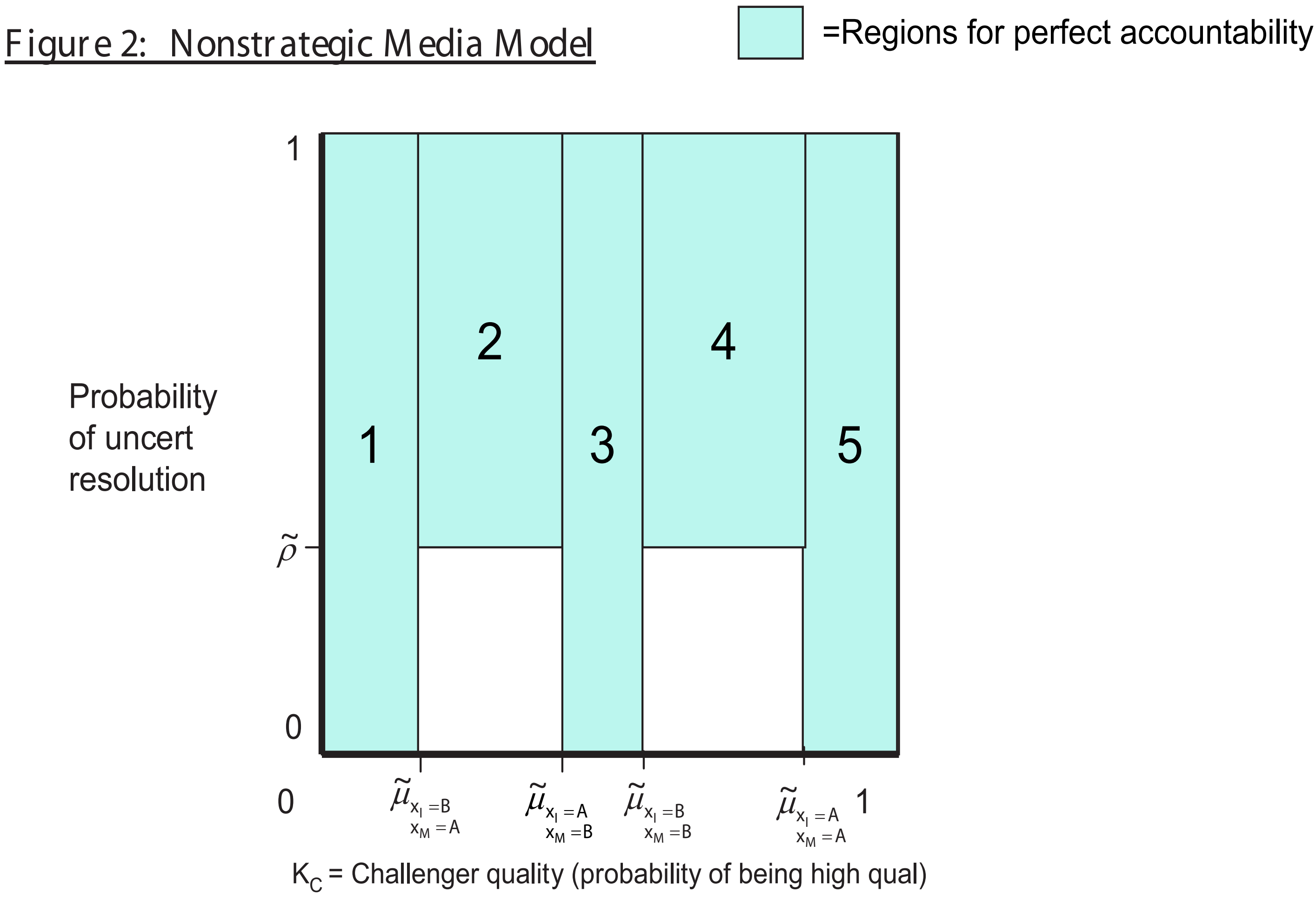


Figure 2: The shaded areas represent parameter values that support a perfect accountability equilibrium.

Conditional on uncertainty resolving, the incumbent needs to match her policy to the state, and she wants to follow her signal. Conditional on uncertainty not resolving, the incumbent needs to match the media's announcement. The media just announces its signal, so the incumbent wants to choose the policy most likely to be the media's signal. Since $q^M > 1/2$, the media's signal will, more likely than not, match the true state of the world, making the incumbent's optimal choice $x_I = s_I$. Thus there is a perfect accountability equilibrium in region 3 of Figure 2.

We've just seen that, in line with the Jeffersonian intuition, more information reduces pandering incentives when the race is close. But things are more complicated when one candidate has a moderate advantage over the other. If $\kappa_C \in (\tilde{\mu}(B, B, \phi), \tilde{\mu}(A, A, \phi))$, then the incumbent wins only if either uncertainty resolves and her choice was correct, or if uncertainty does not resolve and both the incumbent's policy choice and media announcement are A. And if $\kappa_C \in (\tilde{\mu}(B, A, \phi), \tilde{\mu}(A, B, \phi))$, then the incumbent wins unless uncertainty resolves and her action was wrong or uncertainty does not resolve, the incumbent chooses B and the media announces A. The voters' asymmetric treatment of disagreements between the incumbent and the media creates incentives for pandering.

Conveniently, the two cases lead to the same incentive constraints for incumbent behavior.

Lemma 5 *Assume that either $\kappa_C \in (\tilde{\mu}(B, B, \phi), \tilde{\mu}(A, A, \phi))$ or $\kappa_C \in (\tilde{\mu}(B, A, \phi), \tilde{\mu}(A, B, \phi))$. The incumbent chooses A if and only if*

$$(\alpha + \rho v(\theta))\,(2\Pr(\omega = A \mid s_I, \theta_I) - 1) + (1 - \rho)v(\theta)\Pr(s_M = A \mid s_I, \theta_I) \geq 0.$$

(Proof in the Appendix.)

As in the baseline model, there is no incentive problem for an incumbent who sees signal A. Such an incumbent has a posterior $\Pr(\omega = A \mid s_I = A, \theta_I) > 1/2$, and the incentive constraint is satisfied.

The case of signal $s_I = B$ is more interesting. For either type incumbent, the first term in the inequality gives the incumbent an incentive to follow her signal because $\Pr(\omega = A \mid s_I, \theta_I) < 1/2$. The second term, however, represents an incentive to pander.

As in the baseline model, the low quality incumbent has the stronger incentive to pander.

Lemma 6 *With simultaneous announcements, for any parameters at which a low quality incumbent wants to follow a B signal, a high quality incumbent also wants to follow a B signal.*

The low type follows her signal if and only if

$$(\alpha + \rho v(L))\,(2\lambda_B - 1) + (1 - \rho)v(L)\underline{\gamma} \geq 0$$

or

$$\rho \geq \frac{\alpha(2\lambda_B - 1) + v(L)\underline{\gamma}}{2v(L)(1-\lambda_B) - v(L)\left(1-\underline{\gamma}\right)} \equiv \tilde{\rho}. \tag{5}$$

We summarize these results as:

Proposition 2 *In the simultaneous announcement model, there is a perfect accountability equilibrium if one of the following conditions holds:*

1. $\kappa_C < \tilde{\mu}(B, A, \phi)$, *i.e., challenger reputation is worse than an incumbent who chooses* $x_I = B$ *and is criticized by the media, which announces* $x_M = A$.
2. $\kappa_C \in (\tilde{\mu}(A, B, \phi), \tilde{\mu}(B, B, \phi))$, *i.e., the election is competitive.*
3. $\kappa_C \geq \tilde{\mu}(A, A, \phi)$, *i.e., challenger reputation is better than an incumbent who chooses* $x_I = A$ *and is supported by the media, which announces* $x_M = A$.
4. $\rho > \tilde{\rho}$, *i.e., uncertainty resolution is likely.*

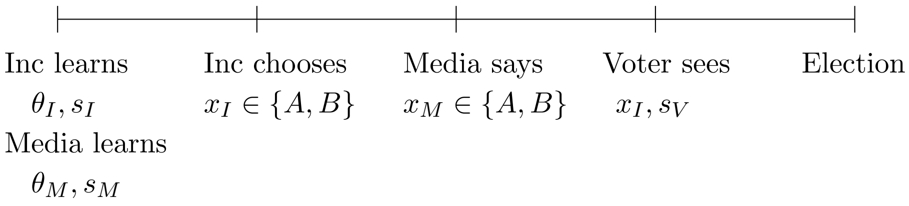
The Jeffersonian intuition, that media information reduces pandering incentives, is partially vindicated by a comparison of the conditions for perfect accountability in the baseline model and with simultaneous media announcements. First, direct comparison of the formulas shows that $\overline{\rho} > \tilde{\rho}$, so the media reduces the cutoff for the probability of resolution necessary to ensure a perfect accountability equilibrium. Whereas in the baseline model the incumbent could attain the electoral benefits of pandering simply by choosing policy A, in the model with the media the electoral benefits of pandering are less certain because they also depend, in part, on the media's actions.

More subtly, the media also eliminates pandering when ρ is small and the race is close. This is because, in a close race, the media induces the voter to treat the two possible incumbent actions symmetrically – choosing either action, popular or unpopular, leads to reelection only if either the public signal or the media supports the choice.

But comparing the conditions for existence of a perfect accountability equilibrium also reveals limits to the Jeffersonian intuition. It is straightforward to show that $\tilde{\mu}(B, A, \phi) < \overline{\mu}(B, \phi)$ and $\overline{\mu}(A, \phi) < \tilde{\mu}(A, A, \phi)$. This is not surprising: $\tilde{\mu}(B, A, \phi) < \overline{\mu}(B, \phi)$, for example, says that the unpopular policy choice along with a discordant media announcement is worse news about the incumbent's type than is an unpopular policy choice alone. And this means that there are parameter values – $\rho < \tilde{\rho}$ and $\kappa_C \in (\tilde{\mu}(B, A, \phi), \overline{\mu}(B, \phi)) \cup (\overline{\mu}(A, \phi), \tilde{\mu}(A, A, \phi))$ – for which pandering occurs in the simultaneous media announcement model but *not* in the baseline model. To see the intuition for this, consider an incumbent with a moderate advantage over the challenger. In the baseline model, she knows that choosing $x_I = B$ will not cause her defeat if uncertainty does not resolve. In the simultaneous media announcement model, however, she knows that if she chooses $x_I = B$ and the media announces $x_M = A$, she will be defeated. Choosing A carries no such risk. This asymmetry creates an incentive to pander.

Sequential Announcements

Now we consider incentives when the media learns the incumbent's policy choice before making its announcement. The timing is:



Media Behavior With simultaneous announcements, the media always wanted to announce its true signal. This is not true in any perfect accountability equilibrium when the media sees the policy choice before making an announcement. In particular, the media will sometimes want to be a yes man, ignoring its own signal and simply following the incumbent's lead.

To see this, suppose the media sees a weak signal that B is the correct policy but also observes the incumbent choose $x_I = A$. In a perfect accountability equilibrium, the media infers that the incumbent's signal was A, so the two signals point in different directions. And the media knows that the incumbent, who might be a high type, gets a signal that is more accurate (on average) than its own, weak, signal. The net impact of these observations is to tilt the media's posterior towards $\omega = A$. Along with the prior bias towards A, this ensures that the media believes the probability $\omega = A$ is greater than 1/2. And because the media wants to match its announcement to the state, it will ignore its signal and announce $x_M = A$.

We want to explore the implications of a yes-man media in the simplest possible case. To this end, we assume that the incumbent is sufficiently likely to be high quality, and hence to correctly match the policy and the state, that the media will be a yes man even when the incumbent's policy choice is B. The following assumption suffices:

Assumption 1 $\kappa_I \geq \frac{q(2\pi-1)}{q(2\pi-1)+(1-\pi)}$.

Without this assumption, conditions for the existence of a perfect accountability equilibrium will be a mixture of the conditions we derive below and those for simultaneous communication. We leave the details to the interested reader.

Under Assumption 1, the media's behavior is straightforward.

Lemma 7 *Under Assumption 1, in any perfect accountability equilibrium of the sequential move game, the media is a* partial yes man. *When the media sees a strong signal, A_H or B_H, it follows this signal, announcing $x_M = A$ or $x_M = B$ respectively. However, if the media sees a weak signal, A_L or B_L, it always says that the incumbent was right, announcing $x_M = x_I$.*

Proof Recall that the media seeks to maximize the probability that $x_M = \omega$. Thus the claim follows from two observations. First, when it sees a strong signal, the media knows that its signal is correct with probability 1, so it announces its signal truthfully. Second, a weak signal A_L or B_L is outweighed by the incumbent's signal, which is truthfully revealed in a perfect accountability equilibrium. To see this last point, use Bayes's rule to write the media's posterior as

$$\Pr(\omega = A \mid s_I = B, s_M = A_L) = \frac{\pi\,(1-\kappa_I)\,(1-q)\,q}{\pi\,(1-\kappa_I)\,(1-q)\,q + (1-\pi)\,[\kappa_I + (1-\kappa_I)\,q]\,(1-q)}$$

which is less than or equal to $\frac{1}{2}$ because, under Assumption 1, $\kappa_I \geq \frac{q(2\pi-1)}{q(2\pi-1)+(1-\pi)}$. □

The sequential model provides insight into media behavior. If the media has imprecise information then it is a complete yes man, always announcing that the incumbent chose the correct policy. With precise information, on the other hand, the media reports its true signal rather than acting as a yes man. Taken as a whole, the media, which can get either a high or low precision signal, is a partial yes man. So the model predicts that media commentators sometimes suppress evidence that incumbents have made policy mistakes. It is particularly noteworthy that we get this result even though the media's sole objective is to give *accurate* information about the state of the world. In particular, the result is not driven by collusion or sidepayments since in our model the media cannot be bought off by the incumbent.[8]

Updating Write $\hat{\mu}(x_I, x_M,\, s_V)$ for the voter's posterior belief that the incumbent is high-quality given first-period policy x_I, media announcement x_M and public signal s_V, under the conjecture that the incumbent sets $x_I = s_I$ and that Lemma 7 describes the media's strategy. Lemma 1 lets us calculate these posteriors for every history that the voter might observe. As in the other variants, the salient aspect is their ranking.

Lemma 8 *With sequential media announcement,*

$$\begin{aligned} 0 = \hat{\mu}(A, x_M, B) = \hat{\mu}(B, x_M, A) = \hat{\mu}(B, A, \phi) = \hat{\mu}(A, B, \phi) \\ < \hat{\mu}(B, B, \phi) < \hat{\mu}(A, A, \phi) < \hat{\mu}(A, x_M, A) = \hat{\mu}(B, x_M, B) < 1. \end{aligned}$$

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[8] For a model in which incumbents may buy off the media, see Besley and Prat (2006).

The most interesting statement in this lemma is $0 = \hat{\mu}(B, A, \phi) = \hat{\mu}(A, B, \phi)$. This stands in sharp contrast to the simultaneous-move model, where $0 < \tilde{\mu}(B, A, \phi) < \tilde{\mu}(A, B, \phi)$. The difference is a consequence of the yes-man media – with sequential moves the media only disagrees with the incumbent's policy choice if it receives a precise signal that the incumbent chose the wrong policy. So if $x_M \neq x_I$ the voter knows that $x_I \neq \omega$; because a high-quality incumbent never chooses $x_I \neq \omega$, the voter thus knows for sure that the incumbent is low quality.

Figure 3 illustrated the conditions under which a perfect accountability equilibrium exists, depending on the parameters of the model. The challenger's probability of being high quality, κ_C, is plotted on the horizontal axis, while the probability of uncertainty resolution, ρ, is plotted on the vertical axis. Lemma 8 divides the horizontal axis into several regions, in each of which the voter uses a different election rule in any perfect accountability equilibrium. We next derive those rules and find out if the incumbent will actually follow her signal given those rules.

We next derive those rules and determine if it is optimal for the incumbent to follow her signal given those rules.

Reelection and policy choice Lemma 8 gives us four cases to consider. If $\kappa_C \leq \hat{\mu}(B, B, \phi)$, then the incumbent wins unless either uncertainty resolves and her choice was wrong, or the media announces that she chose the wrong policy. One of these two events can happen only if she actually chose the wrong policy, because a partial yes-man media only criticizes the incumbent if its signal definitively reveals she was wrong. The incumbent thus strictly prefers to match the policy to her signal, $x_I = s_I$. So there is a perfect accountability equilibrium in region 1 in Figure 3.

If $\kappa_C \in (\hat{\mu}(A, A, \phi), \hat{\mu}(A, x_M, A))$, the incumbent wins only if uncertainty resolves and her choice was correct: $x_I = s_V$. Because her signal is informative, this gives her a strict incentive to match her signal. And if $\kappa_C > \hat{\mu}(A, x_M, A)$ the incumbent can never win, so she prefers to follow her signal. Together, these observations show that there is a perfect accountability equilibrium in region 3.

There are nontrivial pandering incentives if $\kappa_C \in (\hat{\mu}(B, B, \phi), \hat{\mu}(A, A, \phi))$. The incumbent wins

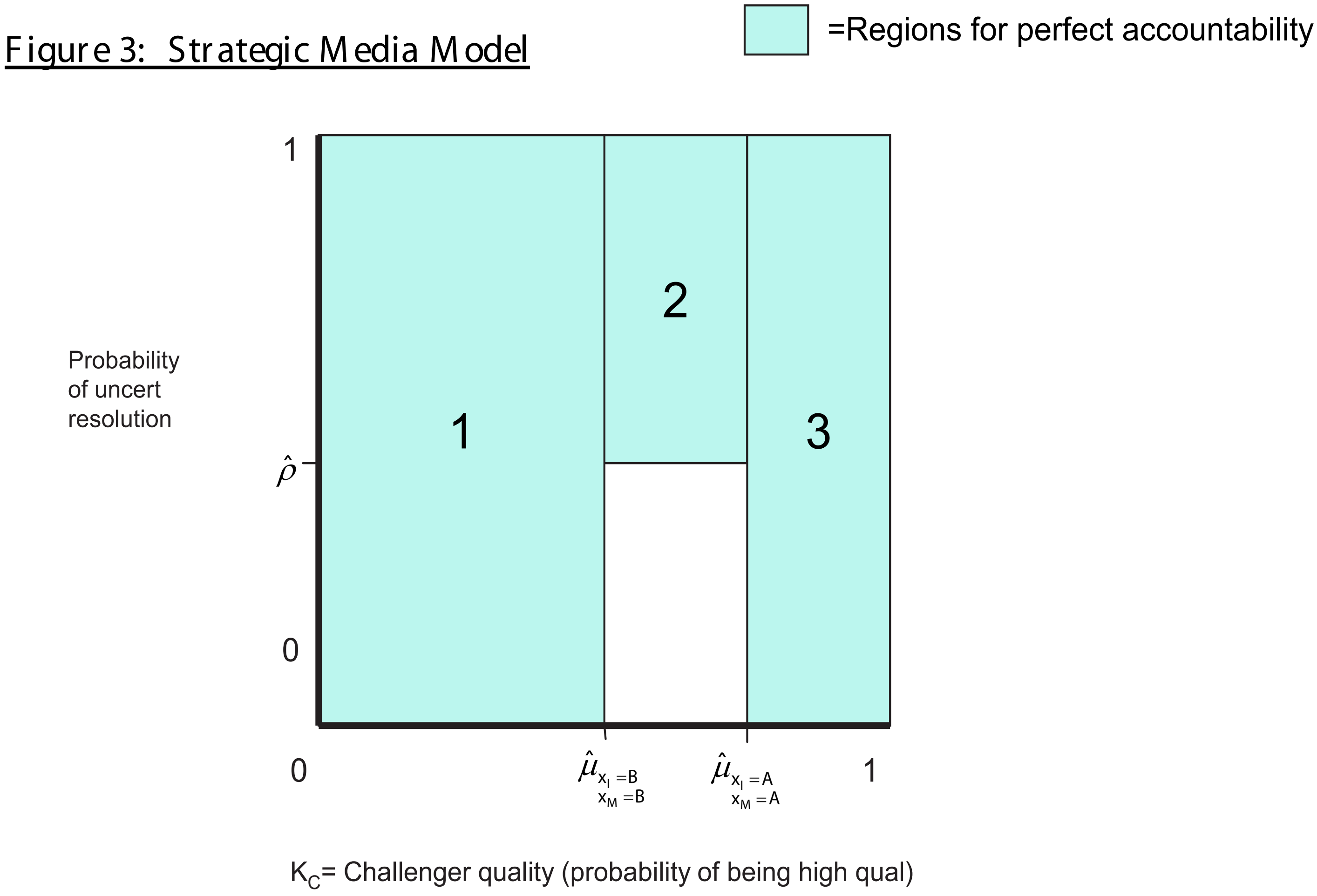

Figure 3: The shaded areas represent parameter values that support a perfect accountability equilibrium.

unless she is proved wrong, either by the public signal revealing a state different than the policy or by a media contradiction. The relevant incentive constraint is easy to derive – we can just reinterpret analogous constraint from the simultaneous media announcement variant. To see this, notice that, again, pandering works only if the media follows through with a confirmatory message. The only difference from before is that, with a partial yes-man media, such confirmation is more likely. Instead of the expression from the simultaneous model,

$$\Pr(x_M = A \mid x_I = A, s_I = B, \theta_I) = \lambda\,(s_I, \theta_I)\, q^M + (1 - \lambda\,(s_I, \theta_I))(1 - q^M),$$

we now have

$$\Pr(x_M = A \mid x_I = A, s_I = B, \theta_I) = \lambda\left(s_I, \theta_I\right) + (1 - \lambda\left(s_I, \theta_I\right))(1 - \kappa_M)$$

where $\lambda\left(s_I, \theta_I\right) = \Pr\left(\omega = A | s_I, \theta_I\right)$. Thus we can simply copy the previous argument to write the no-pandering constraint as

$$\hat{\rho} \equiv \frac{\alpha(2\lambda_B - 1) + v(L)\underline{\gamma}}{2v(L)(1 - \lambda_B) - v(L)\left(1 - \underline{\gamma}\right)} \tag{6}$$

where $\underline{\gamma} = \lambda_B + (1 - \lambda_B)(1 - \kappa_M)$.

We summarize these results as:

Proposition 3 *In the sequential model there is a perfect accountability equilibrium if one of the following conditions holds:*

1. $\kappa_C < \hat{\mu}(B, B, \phi)$, *i.e., challenger reputation is worse than an incumbent who chooses* $x_I = B$ *and is supported by the media, which announces* $x_M = B$.
2. $\kappa_C \geq \hat{\mu}(A, A, \phi)$, *i.e., challenger reputation better than an incumbent who chooses* $x_I = A$ *and is criticized by the media, which announces* $x_M = A$.
3. $\rho > \hat{\rho}$, *i.e., uncertainty resolution is likely.*

It's natural to conjecture that a partial yes-man media is worse than a media that truthfully reports its signal. But, like the intuition that more information must improve incentives more generally, this conjecture is only partly correct. A simple comparison confirms that $\tilde{\rho} < \hat{\rho} < \bar{\rho}$, fitting well with the intuition that the more honestly the media reports its signal, the more beneficial will be the effects on policy choice.

However, a focus solely on ρ misses part of the story. Pandering incentives also depend on the difference in the two candidates' reputations, and, for some values of κ_C, there is pandering in the simultaneous model but not in the sequential model. Specifically, $(\tilde{\mu}(B, A, \phi), \tilde{\mu}(A, B, \phi)) \cup$

$(\tilde{\mu}(B,B,\phi), \tilde{\mu}(A,A,\phi))$ from Proposition 2 is neither a strict superset nor a strict subset of $(\hat{\mu}(B,B,\phi), \hat{\mu}(A,A,\phi))$ from Proposition 3. Thus, at least for some parameter values, a partial yes-man media actually makes things *better* than a nonstrategic media that truthfully reports $x_M = s_M$.

For some intuition, recall that pandering incentives arise when the voter applies different burdens of proof to the incumbent depending on her action choice. With simultaneous announcements, an incumbent with a moderate lead over the challenger will pander because she gets the benefit of the doubt when she chooses the popular action and the media disagrees. With sequential announcements, on the other hand, the media only contradicts the incumbent if its signal perfectly reveals that the incumbent's choice was wrong. Thus the voter no longer gives the popular action an easier burden of proof, and pandering is eliminated.

An interesting additional implication is that pandering does not happen in equilibrium of the sequential announcement variant unless the challenger is ahead of the challenger, $\kappa_C > \kappa_I$. Since selection effects of repeated elections imply that incumbents are more likely than challengers to be high quality (Ashworth and Bueno De Mesquita 2006), a partial yes-man media will do a great job of eliminating pandering. A nonstrategic media, in contrast, will sometimes fail to eliminate pandering when the incumbent is ahead of the challenger.

Which Timing Leads to Better Reelection Decisions?

So far, we've focused on when perfect accountability equilibria exist under different assumptions about the timing of the media's announcement. It's tempting to think the preceding analysis suffices for welfare comparisons across timings: if, for some parameters, one media arrangement leads to perfect accountability and the other does not, isn't the first better for the voter? Not necessarily – we also need to account for the probability the winner of the election is high quality. And this is nontrivial, because, somewhat surprisingly, neither information structure is uniformly more informative in the Blackwell sense. Rather than undertake an exhaustive analysis of this issue, we present two examples that show the informativeness ranking is ambiguous.

Example 1: Simultaneous superior Suppose that the challenger has a moderate quality advantage, so that $\kappa_C \in (\max\{\tilde{\mu}(B,B,\phi), \hat{\mu}(A,A,\phi)\}, \tilde{\mu}(A,A,\phi))$ and the probability of uncertainty resolution is $\rho > \tilde{\rho}$. (This corresponds to part of region 4 of Figure 2 and part of region 3 of Figure 3 for the sequential model.) In either variant, there is a perfect accountability equilibrium at these parameter values. If uncertainty resolves, selection for the second period is the same in either variant: the incumbent is re-elected if and only if $x_I = \omega$. So we can focus on what happens if uncertainty does not resolve.

If uncertainty does not resolve, there is a difference in selection. In the sequential model, the incumbent never wins re-election when uncertainty does not resolve, since $\kappa_C > \hat{\mu}(A,A,\phi)$, so the probability that the second period executive is high quality is simply κ_C. In the simultaneous model, on the other hand, the incumbent wins re-election if and only if $x_I = A$ and $x_M = A$, in which case the probability that the incumbent is high quality is $\tilde{\mu}(A,A,\phi)$. When the incumbent does not win re-election, the probability that the second period executive is high quality is κ_C, and, since $\tilde{\mu}(A,A,\phi) > \kappa_C$, the probability that the second period executive is high quality is strictly greater than κ_C.

Thus, in this example, a simultaneous media announcement is more effective than a sequential media announcement in helping the voter choose a high-quality executive for the second period.

Example 2: Sequential superior Suppose that $\kappa_C \in (0, \tilde{\mu}(B,A,\phi))$. (This corresponds to region 1 of Figure 2 and part of region 1 of of Figure 3.) As in the previous example, there is a perfect accountability equilibrium under these parameter values for either variant, and if uncertainty resolves, selection of a second period executive works the same way in either variant.

If uncertainty does not resolve, however, selection of the second period executive works differently in the two variants. In the simultaneous media model, the incumbent is always re-elected when uncertainty does not resolve, so the probability that the second period executive is high quality is just κ_I. With sequential media announcements, the incumbent loses if she chooses the wrong policy and is criticized by the media, in which he gets replaced by a challenger who is high quality with probability $\kappa_C > 0$. Since the probability a contradicted incumbent is high quality is 0, the martingale property of beliefs implies that the second period executive is high quality with probability strictly greater than κ_I.

Thus, in this example a sequential media is more effective than a simultaneous media at helping the voter choose a high-quality executive for the second period.

Discussion

A clear intuition, suggested by existing models, says that introducing a commentator who can make informative announcements about the state of the world will reduce incumbent incentives to pander – choose an ex-ante popular action even though she knows some other policy is better. We have shown that the actual effect of introducing a commentator is far more subtle than this intuition suggests. The real key to eliminating pandering is to induce the voter to apply the same burden of proof to the incumbent after each possible action that the incumbent may take. For close races, adding a media commentator does induce the voter to treat the actions symmetrically, thus eliminating pandering, but for races where one candidate has a moderate lead, the media can actually introduce asymmetric treatment, with the attendant possibility of pandering.

A particularly interesting implication of the model is that yes-man behavior by the media, while denying information to the voter, can actually improve incentives for the incumbent to choose the correct policy. This result is suprising, since one might think that media deference to the incumbent would inevitably impede the process of accountability by denying information to the voters. Instead, deference in the face of low-precision media information can be necessary for incumbents to take correct actions – only if the media commentator herds can the incumbent be safe from the fear that a mistaken media attack on an already unpopular policy will lead her to be dismissed for taking the right action.

Appendix: Proofs

Proof of Lemma 1 Consider the following learning process. The voter first learns h, and then learns the true state. (The second step may or may not be redundant.) The voter's belief at the time of the election corresponds to the intermediate stage of this process.

At the final stage of the process, the voter's belief about incumbent quality is either 0 or $\overline{\mu}$. Since a probability of an event is just the expected value of an indicator function, the martingale property of Bayesian updating implies $\mu(h) = \Pr(\theta_I = H \mid h) = \mathbb{E}(\Pr(\theta_I = H \mid h, \omega))$, where the expectation is with respect to the realization of the final stage of learning. But the expectation is just $\Pr(\omega = A \mid h)\Pr(\theta_I = H \mid h, \omega = A) + \Pr(\omega = B \mid h)\Pr(\theta_I = H \mid h, \omega = B)$, which gives the result. $\square$

Proof of Lemma 3 Based on Equation 2 in the main text, we write the difference between a low type's gain from choosing A rather than B, and the high type's gain (conditional on $s_I = B$) as

$$\begin{aligned} \Delta \equiv v(L)(1-\rho) + (\alpha + v(L)\rho)\,(2\lambda_B - 1) - (v(H)(1-\rho) - (\alpha + v(H)\rho)) \\ = \quad \alpha(1-q)(2\rho - 1) + 2\lambda_B\,(\alpha + (1+\alpha q)\rho)\,. \end{aligned} \tag{7}$$

At $\rho = 0$, Equation 1 implies that this difference is equal to $\alpha\,(2\lambda_B - (1-q))$. We claim that this difference is positive. Substituting for λ_B from Equation 3 we see that the expression is positive if and only if

$$\begin{aligned} \frac{2\pi(1-q)}{\pi(1-q) + (1-\pi)q} &> 1-q \\ 2\pi &> \pi(1-q) + (1-\pi)q. \end{aligned}$$

Because $\pi > 1/2$, $\pi > \pi(1-q) + (1-\pi)q$, and thus the inequality holds.

Next, we differentiate the expression for the difference in equation 7 with respect to ρ to get

$$\Delta'(\rho) = 2\alpha(1-q) + 2\lambda_B(1+\alpha q) > 0.$$

Thus the difference is positive at $\rho = 0$ and increasing in ρ, so it is positive everywhere. This means that if the low type's incentive constraint is satisfied, i.e., $\Delta \leq 0$, then the high type's incentive constraint is also satisfied. $\square$

Proof of Lemma 5 Consider first the case where the incumbent wins if she is proved correct or if she chooses A and the media agrees. Then choosing A gives payoff

$$(\alpha + \rho v(\theta)) \Pr(\omega = A \mid s_I, \theta_I) + (1-\rho) v(\theta) \Pr(s_M = A \mid s_I, \theta_I),$$

while choosing B gives payoff

$$(\alpha + \rho v(\theta))(1 - \Pr(\omega = A \mid s_I, \theta_I)).$$

Thus the incumbent chooses A if and only if

$$(\alpha + \rho v(\theta)) \left(2 \Pr(\omega = A \mid s_I, \theta_I) - 1\right) + (1-\rho) v(\theta) \Pr(s_M = A \mid s_I, \theta_I) \geq 0. \tag{8}$$

Consider next the case where the incumbent wins is she is proved correct, if she chooses A, or is she chooses B and is backed up by the media. Then choosing A gives payoff

$$(\alpha + \rho v(\theta)) \Pr(\omega = A \mid s_I, \theta_I) + (1-\rho) v(\theta),$$

while choosing B gives payoff

$$(\alpha + \rho v(\theta))(1 - \Pr(\omega = A \mid s_I, \theta_I)) + (1-\rho) v(\theta)(1 - \Pr(s_M = A \mid s_I, \theta_I)).$$

This leads to the same incentive constraint: choose A if and only if

$$(\alpha + \rho v(\theta)) \left(2 \Pr(\omega = A \mid s_I, \theta_I) - 1\right) + (1-\rho) v(\theta) \Pr(s_M = A \mid s_I, \theta_I) \geq 0. \tag{9}$$

$\square$

Proof of Lemma 6 As in the proof for Lemma 3, based on Equation 9, when $s_I = B$, the difference between a low type's gain from choosing A rather than B, and the high type's gain is

$$\begin{aligned}\Delta = (\alpha + \rho v(L)) (2\lambda_B - 1) + (1-\rho) v(L) \left[\lambda_B q^M + (1-\lambda_B)\left(1 - q^M\right)\right] \\ + (\alpha + \rho v(H)) - (1-\rho) v(H) \left(1 - q^M\right).\end{aligned}$$

Substituting in for $v(L)$ and $v(H)$ from Equation 1 yields

$$\Delta = (\alpha + \rho(1+q\alpha))(2\lambda_B - 1) + (1-\rho)(1+q\alpha)\left[\lambda_B q^M + (1-\lambda_B)\left(1-q^M\right)\right] + (\alpha + \rho(1+\alpha)) - (1-\rho)(1+\alpha)\left(1-q^M\right). \tag{10}$$

At $\rho = 0$, this reduces to

$$\alpha(2\lambda_B - 1) + (1+q\alpha)\left[\lambda_B q^M + (1-\lambda_B)\left(1-q^M\right)\right] + \alpha - (1+\alpha)\left(1-q^M\right).$$

We claim this expression is positive. Since $\lambda_B q^M + (1-\lambda_B)\left(1-q^M\right) > 1 - q^M$ it suffices to show

$$\begin{aligned}
\alpha(2\lambda_B - 1) + (1+q\alpha)\left(1-q^M\right) + \alpha - (1+\alpha)\left(1-q^M\right) &> 0 \\
2\lambda_B &> (1-q)\left(1-q^M\right) \\
2\frac{\pi(1-q)}{\pi(1-q) + (1-\pi)q} &> (1-q)\left(1-q^M\right) \\
2\pi &> \pi(1-q)\left(1-q^M\right) + (1-\pi)q\left(1-q^M\right).
\end{aligned}$$

This last expression holds because $\pi > \pi(1-q)\left(1-q^M\right)$ and $\pi > 1/2 > (1-\pi)q\left(1-q^M\right)$.

Having established that $\Delta'(\rho) > 0$, we now differentiate Equation 10 with respect to ρ to get

$$\begin{aligned}
\Delta'(\rho) &= (1+q\alpha)(2\lambda_B - 1) - (1+q\alpha)\left[\lambda_B q^M + (1-\lambda_B)\left(1-q^M\right)\right] \\
&\quad +(1+\alpha) + (1+\alpha)\left(1-q^M\right) \\
&= 2\lambda_B - 1 - \left[\lambda_B q^M + (1-\lambda_B)\left(1-q^M\right)\right] + 2 \\
&\quad +\alpha\left[q(2\lambda_B - 1) - q\left[\lambda_B q^M + (1-\lambda_B)\left(1-q^M\right)\right] + 2\right].
\end{aligned} \tag{11}$$

Because $2\lambda_B - 1 > -1$, $\lambda_B q^M + (1-\lambda_B)\left(1-q^M\right)$, and $q \in (0,1)$ Equation 11 is strictly greater than zero. As in the proof of Lemma 3 the fact that the difference is positive at $\rho = 0$ and increasing everywhere is sufficient to ensure that if the low type's incentive constraint is satisfied, the high type's incentive constraint is also satisfied. □

References

[1] Ashworth, Scott O., and Ethan Bueno de Mesquita. 2006. "Electoral Selection and the Incumbency Advantage." Princeton Typescript.

[2] Baron, David P. 2004. "Persistent Media Bias." Stanford Typescript.

[3] Bernhardt, Dan, Stefan Krasa, and Mattias Polborn. 2006. "Political Polarization and the Electoral Effects of Media Bias." Illinois typescript.

[4] Besley, Timothy, and Andrea Prat. 2006. "Handcuffs for the Grabbing Hand? The Role of the Media in Political Accountability." *American Economic Review* 96(3):720–736.

[5] Bikhchandani, S. and D. Hirshleifer and I. Welch. 1992. "A Theory of Fads, Fashion, Custom, and Cultural Change as Informational Cascades." *Journal of Political Economy* 100: 992–1026.

[6] Canes-Wrone, Brandice, Michael C. Herron, and Kenneth W. Shotts. 2001. "Leadership and Pandering: A Theory of Executive Policymaking." *American Journal of Political Science* 45(3):532–550.

[7] Carpenter, Daniel. 2002. "Groups, the Media, Agency Waiting Costs, and FDA Drug Approval." *American Journal of Political Science* 46 (3):490–505.

[8] Egorov, Georgy, Sergei Guriev, and Konstantin Sonin. 2007. "Media Freedom, Bureaucratic Incentives, and the Resource Curse." New Economic School Typescript.

[9] Gentzkow Matthew, and Jesse M. Shapiro. 2006. "Media Bias and Reputation." *Journal of Political Economy* 114(2):280–316.

[10] Gentzkow, Matthew, and Jesse M. Shapiro. 2007. "What Drives Media Slant? Evidence from U.S. Daily Newspapers." University of Chicago Typescript.

[11] Groseclose, Tim, and Jeffrey Milyo. 2005. "A Measure of Media Bias." *Quarterly Journal of Economics* 120(4):1191–1237.

[12] Ho, Daniel E. and Kevin M. Quinn. 2007. "Assessing Political Positions of Media." Stanford Typescript.

[13] Maskin, Eric and Jean Tirole. 2004. "The Politician and the Judge: Accountability in Government." *American Economic Review* 94(4):1034–1054.

[14] Page, Benjamin I. 1996. *Who Deliberates?.* Chicago: The University of Chicago Press.

[15] Prat, Andrea. 2005. "The Wrong Kind of Transparency." *American Economic Review* 95(3):862–877.

[16] Prendergast, Canice. 1993. "A Theory of 'Yes Men.' " *American Economic Review* 83(4):757–770.

[17] Sharfstein, D. and J. Stein. 1990. "Herd Behavior and Investment." *American Economic Review* 80: 465–479.

[18] Stromberg, David. 2004. "Mass Media Competition, Political Competition, and Public Policy." *Review of Economic Studies* 71:265–284.

Supplemental Appendix for Referees Only

If the paper is accepted, this appendix will be made available online for interested readers. We first show how Bayes's Rule can be used to calculate voter beliefs – because these calculations are just a matter of straightforward algebra they are omitted from the main text. Second, we summarize mixed strategy pandering equilibria for parameter values such that no perfect accountability equilibrium exists. Even stating these equilibria is highly tedious, so they are omitted from the main text.

Proof of Lemma 4 The only nontrivial steps are the inequalities involving ϕ.

First consider the inequality , $\tilde{\mu}(B, A, \phi) < \tilde{\mu}(A, B, \phi)$. For these beliefs, the voter knows that one of the two actors – the incumbent and the media – received a correct signal and the other received an incorrect signal. By Lemma 1, this inequality is equivalent to

$$\Pr(\omega = B \mid x_I = B, x_M = A) < \Pr(\omega = A \mid x_I = A, x_M = B)$$

where $\Pr(\omega = B \mid x_I = B, x_M = A) = \frac{(1-\pi)[\kappa_I+(1-\kappa_I)q]\left(1-q^M\right)}{(1-\pi)[\kappa_I+(1-\kappa_I)q](1-q^M)+\pi(1-\kappa_I)(1-q)q^M}$ and $\Pr(\omega = A \mid x_I = A, x_M = B) = \frac{\pi[\kappa_I+(1-\kappa_I)q]\left(1-q^M\right)}{\pi[\kappa_I+(1-\kappa_I)q](1-q^M)+(1-\pi)(1-\kappa_I)(1-q)q^M}$. Substituting in and simplifying, the inequality reduces to

$$\frac{1}{1+\frac{(1-\kappa_I)(1-q)}{[\kappa_I+(1-\kappa_I)q]}\frac{q^M}{(1-q^M)}\frac{\pi}{(1-\pi)}} < \frac{1}{1+\frac{(1-\kappa_I)(1-q)}{[\kappa_I+(1-\kappa_I)q]}\frac{q^M}{(1-q^M)}\frac{(1-\pi)}{\pi}}$$

which holds because $\pi > \frac{1}{2}$.

Next we show that $\tilde{\mu}(A, B, \phi) < \tilde{\mu}(B, B, \phi)$. By Lemma 1, this inequality is equivalent to

$$\Pr(\omega = A \mid x_I = A, x_M = B) < \Pr(\omega = B \mid x_I = B, x_M = B).$$

Writing out the expression using Bayes's Rule and rearranging terms yields

$$\frac{1}{1+\frac{(1-q)(1-\kappa_I)}{[\kappa_I+q(1-\kappa_I)]}\frac{q^M}{1-q^M}\frac{1-\pi}{\pi}} < \frac{1}{1+\frac{(1-q)(1-\kappa_I)}{[\kappa_I+q(1-\kappa_I)]}\frac{1-q^M}{q^M}\frac{\pi}{1-\pi}},$$

which is true because $q^M > \pi > \frac{1}{2}$.

Finally, we show that $\tilde{\mu}(B, B, \phi) < \tilde{\mu}(A, A, \phi)$. By Lemma 1, this inequality is equivalent to

$$\Pr(\omega = B \mid x_I = B, x_M = B) < \Pr(\omega = A \mid x_I = A, x_M = A).$$

Writing out the expression using Bayes's Rule and rearranging terms yields

$$\frac{1}{1 + \frac{(1-q)(1-\kappa_I)}{[\kappa_I + q(1-\kappa_I)]} \frac{1-q^M}{q^M} \frac{\pi}{1-\pi}} < \frac{1}{1 + \frac{(1-q)(1-\kappa_I)}{[\kappa_I + q(1-\kappa_I)]} \frac{1-q^M}{q^M} \frac{1-\pi}{\pi}},$$

which is true because $\pi > \frac{1}{2}$. □

Proof of Lemma 8 For the equalities in the first line of the lemma, the key is that only a high quality media will disagree with an incumbent, and a high quality media always sees $s_M = \omega$ and announces $x_M = s_M$. This fact, combined with the fact that only a low quality incumbent will choose $x_I \neq \omega$, means that when the media and the incumbent disagree it must be the case that the incumbent is low quality.

The only other non-trivial step is $\hat{\mu}(B, A, \phi) < \hat{\mu}(A, B, \phi)$, for which we need

$$\Pr(\omega = B \mid x_I = B, x_M = B) < \Pr(\omega = A \mid x_I = A, x_M = A)$$

where $\Pr(\omega = B \mid x_I = B, x_M = B) = \frac{(1-\pi)[\kappa_I + (1-\kappa_I)q]}{(1-\pi)[\kappa_I + (1-\kappa_I)q] + \pi(1-\kappa_I)(1-q)(1-\kappa_M)}$ and $\Pr(\omega = A \mid x_I = A, x_M = A) = \frac{\pi[\kappa_I + (1-\kappa_I)q]}{\pi[\kappa_I + (1-\kappa_I)q] + (1-\pi)(1-\kappa_I)(1-q)(1-\kappa_M)}$. Substituting in and simplifying, the inequality reduces to

$$\frac{1}{1 + \frac{(1-\kappa_I)(1-q)(1-\kappa_M)}{\kappa_I + (1-\kappa_I)q} \frac{\pi}{(1-\pi)}} < \frac{1}{1 + \frac{(1-\kappa_I)(1-q)(1-\kappa_M)}{\kappa_I + (1-\kappa_I)q} \frac{(1-\pi)}{\pi}}$$

which is true because $\pi > 1/2$. □

Equilibrium in baseline model when there is no perfect accountability equilibrium. In the baseline model, if $\kappa_C \in (\overline{\mu}(B, \phi), \overline{\mu}(A, \phi))$ and $\rho < \overline{\rho}$ then there cannot be a perfect accountability equilibrium. However, there is an equilibrium in which the incumbent panders. Since this equilibrium is quite similar to the pandering equilibrium in the basic model of Canes-Wrone, Herron, and Shotts

(2001), we do not elaborate it at length here. In the equilibrium, a high quality incumbent plays $x_I = s_I$, whereas a low quality incumbent plays $x_I = A$ when $s_I = A$ and mixes when $s_I = B$, playing A with probability $\sigma \in (0,1)$. The voter re-elects whenever uncertainty is revealed and $x_I = \omega$, and removes the incumbent when uncertainty is revealed and $x_I \neq \omega$. The incumbent's mixed strategy σ, as well as the voter's behavior when uncertainty is not revealed depend on κ_C.

If $\kappa_C \in (\overline{\mu}(B,\phi), \kappa_I)$ then $\sigma = 1 - \frac{\kappa_I(1-\kappa_C)(1-\pi)}{\kappa_C(1-\kappa_I)[\pi(1-q)+(1-\pi)q]}$. The voter always re-elects the incumbent when $x_I = A$ and uncertainty does not resolve, and re-elects the incumbent with probability $1 - (1-2\lambda_B)\frac{1+(1+q\alpha)\rho}{(1+q\alpha)(1-\rho)}$ when $x_I = B$ and uncertainty does not resolve.

If $\kappa_C \in (\kappa_I, \overline{\mu}(A,\phi))$ then $\sigma = \frac{\kappa_I(1-\kappa_C)\pi - \kappa_C(1-\kappa_I)[\pi q+(1-\pi)(1-q)]}{\kappa_C(1-\kappa_I)[\pi(1-q)+(1-\pi)q]}$. The voter re-elects the incumbent with probability $(1-2\lambda_B)\frac{1+(1+q\alpha)\rho}{(1+q\alpha)(1-\rho)}$ when $x_I = A$ and uncertainty does not resolve, and always removes the incumbent when $x_I = B$ and uncertainty does not resolve.

Equilibrium in simultaneous model when there is no perfect accountability equilibrium. In the simultaneous model, if $\kappa_C \in (\tilde{\mu}(B,A,\phi), \tilde{\mu}(A,B,\phi)) \cup (\tilde{\mu}(B,B,\phi), \tilde{\mu}(A,A,\phi))$, and $\rho < \tilde{\rho}$ then there cannot be a perfect accountability equilibrium. However, there is an equilibrium in which the incumbent panders. In the equilibrium, a high quality incumbent plays $x_I = s_I$, whereas a low quality incumbent plays $x_I = A$ when $s_I = A$ and mixes when $s_I = B$, playing A with probability $\sigma \in (0,1)$. The voter re-elects whenever uncertainty is revealed and $x_I = \omega$, and removes the incumbent when uncertainty is revealed and $x_I \neq \omega$. The incumbent's mixed strategy σ, as well as the voter's behavior when uncertainty is not revealed depend on κ_C relative to the following cutpoints: $\tilde{\kappa}_C^1 = \frac{y_1}{y_1+y_2}$ and $\tilde{\kappa}_C^2 = \frac{y_3}{y_3+y_4}$ where

$$\begin{aligned}
y_1 &= \kappa_I \left[\pi(1-\pi)\left(1-q^M\right)^2 + q^M\left(1-q^M\right)\left[(1-\pi)^2 q + \pi^2(1-q)\right]\right] \\
y_2 &= (1-\kappa_I)\left[\pi\left(1-q^M\right) + (1-\pi)q^M\right]\left[\pi(1-q)q^M + (1-\pi)q\left(1-q^M\right)\right] \\
y_3 &= \kappa_I \left[\pi(1-\pi)\left(q^M\right)^2 + q^M\left(1-q^M\right)\left[(1-\pi)^2 q + \pi^2(1-q)\right]\right] \\
y_4 &= (1-\kappa_I)\left[\pi q^M + (1-\pi)\left(1-q^M\right)\right]\left[\pi(1-q)\left(1-q^M\right) + (1-\pi)q q^M\right].
\end{aligned}$$

If $\kappa_C \in (\tilde{\mu}(B, A, \phi), \tilde{\kappa}_C^1)$ then $\sigma = 1 - \frac{\kappa_I(1-\kappa_C)(1-\pi)\left(1-q^M\right)}{\kappa_C(1-\kappa_I)[\pi(1-q)q^M+(1-\pi)q(1-q^M)]}$. The voter always re-elects the incumbent when $x_I = A$ and uncertainty does not resolve, as well as when $x_I = x_M = B$ and uncertainty does not resolve. When $x_I = B$, $x_M = A$ and uncertainty does not resolve, the voter re-elects the incumbent with probability $1 - (1 - 2\lambda_B) \frac{1+(1+q\alpha)\rho}{(1+q\alpha)(1-\rho)[\lambda_B q^M+(1-\lambda_B)(1-q^M)]}$.

If $\kappa_C \in (\tilde{\kappa}_C^1, \tilde{\mu}(A, B, \phi))$ then $\sigma = \frac{\kappa_I(1-\kappa_C)\pi\left(1-q^M\right)-\kappa_C(1-\kappa_I)\left[\pi q\left(1-q^M\right)+(1-\pi)(1-q)q^M\right]}{\kappa_C(1-\kappa_I)[\pi(1-q)(1-q^M)+(1-\pi)qq^M]}$. When $x_I = x_M$ and uncertainty does not resolve, the voter always re-elects the incumbent. When $x_I \neq x_M$ the voter always removes the incumbent if $x_I = B$ and re-elects her with probability $\frac{1-2\lambda_B+(1+q\alpha)\left[\rho(1-2\lambda_B)+(1-\rho)\left(2\left[\lambda_B\left(1-q^M\right)+(1-\lambda_B)q^M\right]-1\right)\right]}{(1+q\alpha)(1-\rho)[\lambda_B(1-q^M)+(1-\lambda_B)q^M]}$ when $x_I = A$.

If $\kappa_C \in (\tilde{\mu}(B, B, \phi), \tilde{\kappa}_C^2)$ then $\sigma = 1 - \frac{\kappa_I(1-\kappa_C)(1-\pi)q^M}{\kappa_C(1-\kappa_I)[\pi(1-q)(1-q^M)+(1-\pi)qq^M]}$. When $x_I \neq x_M$ and uncertainty does not resolve, the voter always removes the incumbent. When $x_I = x_M$ the voter always re-elects the incumbent if $x_I = A$ and re-elects her with probability $\frac{2\lambda_B-1+(1+q\alpha)\left[\rho(2\lambda_B-1)+(1-\rho)\left(1-\left[\lambda_B\left(1-q^M\right)+(1-\lambda_B)q^M\right]\right)\right]}{(1+q\alpha)(1-\rho)[\lambda_B(1-q^M)+(1-\lambda_B)q^M]}$ if $x_I = B$.

If $\kappa_C \in (\tilde{\kappa}_C^2, \tilde{\mu}(A, A, \phi))$ then $\sigma = \frac{\kappa_I(1-\kappa_C)\pi q^M-\kappa_C(1-\kappa_I)\left[\pi q q^M+(1-\pi)(1-q)\left(1-q^M\right)\right]}{\kappa_C(1-\kappa_I)[\pi(1-q)q^M+(1-\pi)q(1-q^M)]}$. When $x_I \neq x_M$ and uncertainty does not resolve, the voter always removes the incumbent. When $x_I = x_M$ and uncertainty does not resolve, the voter always removes the incumbent if $x_I = B$ and re-elects her with probability $\frac{1-2\lambda_B+(1+q\alpha)\rho(1-2\lambda_B)}{(1+q\alpha)(1-\rho)[\lambda_B q^M+(1-\lambda_B)(1-q^M)]}$ if $x_I = A$.

Equilibrium in sequential model when there is no perfect accountability equilibrium. In the sequential model, if $\kappa_C \in (\hat{\mu}(B, B, \phi), \hat{\mu}(A, A, \phi))$, and $\rho < \hat{\rho}$ then there cannot be a perfect accountability equilibrium. However, there is an equilibrium in which the incumbent panders. In the equilibrium, a high quality incumbent plays $x_I = s_I$, whereas a low quality incumbent plays $x_I = A$ when $s_I = A$ and mixes when $s_I = B$, playing A with probability $\sigma \in (0, 1)$. The voter re-elects whenever uncertainty is revealed and $x_I = \omega$, and removes the incumbent when uncertainty is revealed and $x_I \neq \omega$, as well as when uncertainty is not revealed and $x_I \neq x_M$. When the media sees a strong signal, A_H or B_H, it follows this signal, announcing $x_M = A$ or $x_M = B$ respectively. However, if the media sees a weak signal, A_L or B_L, it always says that the incumbent was right, announcing $x_M = x_I$. The incumbent's mixed strategy, σ, as well as the voter's behavior when uncertainty is not revealed depend on κ_C relative to the cutpoint $\hat{\kappa}_C = \frac{y_5}{y_5+y_6}$, where

$$\begin{aligned} y_5 &= \kappa_I \left[\pi (1-\pi) + (1-\kappa_M) \left[\pi^2 (1-q) + (1-\pi)^2 q\right]\right] \\ y_6 &= (1-\kappa_I) [\pi + (1-\pi)(1-\kappa_M)] [\pi (1-q)(1-\kappa_M) + (1-\pi) q] \end{aligned}$$

If $\kappa_C \in (\hat{\mu}(B,B,\phi), \hat{\kappa}_C)$ then $\sigma = 1 - \frac{\kappa_I(1-\kappa_C)(1-\pi)}{\kappa_C(1-\kappa_I)[\pi(1-q)(1-\kappa_M)+(1-\pi)q]}$. When $x_I \neq x_M$ and uncertainty does not resolve, the voter always removes the incumbent. When $x_I = x_M$ the voter always re-elects the incumbent if $x_I = A$ and re-elects her with probability $\frac{2\lambda_B-1+(1+q\alpha)[\rho(2\lambda_B-1)+(1-\rho)(1-\kappa_M(1-\lambda_B))]}{(1+q\alpha)(1-\rho)[\kappa_M(1-\lambda_B)+(1-\kappa_M)]}$ and if $x_I = B$.

If $\kappa_C \in (\hat{\kappa}_C, \hat{\mu}(A,A,\phi))$ then $\sigma = \frac{\kappa_I(1-\kappa_C)\pi-\kappa_C(1-\kappa_I)[\pi q+(1-\pi)(1-q)(1-\kappa_M)]}{\kappa_C(1-\kappa_I)[\pi(1-q)+(1-\pi)q(1-\kappa_M)]}$. When $x_I \neq x_M$ and uncertainty does not resolve, the voter always removes the incumbent. When $x_I = x_M$ and uncertainty does not resolve, the voter always removes the incumbent if $x_I = B$ and re-elects her with probability $\frac{1-2\lambda_B+(1+q\alpha)\rho(1-2\lambda_B)}{(1+q\alpha)(1-\rho)[1-\kappa_M(1-\lambda_B)]}$ if $x_I = A$.

For this equilibrium, we also must confirm that the media herds after seeing a weak signal. In the main text we showed that the media herds when the incumbent always follows his signal, as in a perfect accountability equilibrium. If, instead, a low-quality incumbent only plays $x_I = B$ with probability $1-\sigma < 1$ then the media will obviously still herd when its signal is weak and the incumbent plays B, since the incumbent's choice of $x_I = B$ provides stronger evidence that the true state is B than in a perfect accountability equilibrium. However, we also must confirm that the media still herds when $x_I = A$, since when $\sigma \in (0,1)$ the incumbent's choice of $x_I = A$ provides weaker evidence that the true state is A than in a perfect accountability equilibrium. Specifically, we need

$$
\begin{aligned}
\Pr\left(\omega = A | x_I = A, s_M = B_L\right) &\geq 1/2 \\
\frac{\pi\left[\kappa_I + \left(1-\kappa_I\right)\left(q + \left(1-q\right)\sigma\right)\right]\left(1-q\right)}{\pi\left[\kappa_I + \left(1-\kappa_I\right)\left(q + \left(1-q\right)\sigma\right)\right]\left(1-q\right) + \left(1-\pi\right)\left(1-\kappa_I\right)\left(1-q+q\sigma\right)q} &\geq 1/2 \\
\pi\left[\kappa_I + \left(1-\kappa_I\right)\left(q + \left(1-q\right)\sigma\right)\right]\left(1-q\right) &\geq \left(1-\pi\right)\left(1-\kappa_I\right)\left(1-q+q\sigma\right)q \\
\pi\kappa_I\left(1-q\right) + \pi\left(1-\kappa_I\right)q\left(1-q\right) - \left(1-\pi\right)\left(1-\kappa_I\right)q\left(1-q\right) &\geq \sigma\left(1-\kappa_I\right)\left[\left(1-\pi\right)q^2 - \pi\left(1-q\right)^2\right] \\
\frac{\left(1-q\right)\left[\pi\kappa_I + \left(2\pi-1\right)\left(1-\kappa_I\right)q\right]}{\left(1-\kappa_I\right)\left[\left(1-\pi\right)q^2 - \pi\left(1-q\right)^2\right]} &\geq \sigma. \qquad (12)
\end{aligned}
$$

We now check to confirm that this condition holds. The highest value of σ is when the challenger's quality is $\hat{\kappa}_C$, which is the point where σ for $\kappa_C \in (\hat{\mu}(B,B,\phi), \hat{\kappa}_C)$ equals σ for $\kappa_C \in (\hat{\kappa}_C, \hat{\mu}(A,A,\phi))$. We use the former expression and substitute in for $\hat{\kappa}_C$:

$$
\begin{aligned}
\sigma &= 1 - \frac{\kappa_I(1-\kappa_C)\left(1-\pi\right)}{\kappa_C(1-\kappa_I)\left[\pi\left(1-q\right)\left(1-\kappa_M\right) + \left(1-\pi\right)q\right]} \\
&= 1 - \frac{\kappa_I(\frac{y_6}{y_5+y_6})\left(1-\pi\right)}{\frac{y_5}{y_5+y_6}\left(1-\kappa_I\right)\left[\pi\left(1-q\right)\left(1-\kappa_M\right) + \left(1-\pi\right)q\right]} \\
&= 1 - \frac{\kappa_I\left(1-\kappa_I\right)\left[\pi + \left(1-\pi\right)\left(1-\kappa_M\right)\right]\left[\pi\left(1-q\right)\left(1-\kappa_M\right) + \left(1-\pi\right)q\right]\left(1-\pi\right)}{\kappa_I\left[\pi\left(1-\pi\right) + \left(1-\kappa_M\right)\left[\pi^2\left(1-q\right) + \left(1-\pi\right)^2 q\right]\right]\left(1-\kappa_I\right)\left[\pi\left(1-q\right)\left(1-\kappa_M\right) + \left(1-\pi\right)q\right]} \\
&= 1 - \frac{\left[\pi + \left(1-\pi\right)\left(1-\kappa_M\right)\right]\left(1-\pi\right)}{\pi\left(1-\pi\right) + \left(1-\kappa_M\right)\left[\pi^2\left(1-q\right) + \left(1-\pi\right)^2 q\right]} \\
&= \frac{\pi\left(1-\pi\right) + \left(1-\kappa_M\right)\left[\pi^2\left(1-q\right) + \left(1-\pi\right)^2 q\right] - \left[\pi + \left(1-\pi\right)\left(1-\kappa_M\right)\right]\left(1-\pi\right)}{\pi\left(1-\pi\right) + \left(1-\kappa_M\right)\left[\pi^2\left(1-q\right) + \left(1-\pi\right)^2 q\right]} \\
&= \frac{\left(1-q\right)\left(1-\kappa_M\right)\left[\pi^2 - \left(1-\pi\right)^2\right]}{\pi\left(1-\pi\right) + \left(1-\kappa_M\right)\left[\pi^2\left(1-q\right) + \left(1-\pi\right)^2 q\right]} \\
&= \frac{\left(1-q\right)\left(1-\kappa_M\right)\left(2\pi-1\right)}{\pi\left(1-\pi\right) + \left(1-\kappa_M\right)\left[\pi^2\left(1-q\right) + \left(1-\pi\right)^2 q\right]}
\end{aligned}
$$

We now use this value for σ to confirm that the inequality in Equation 12 is satisfied, i.e.,

$$
\frac{\left(1-q\right)\left[\pi\kappa_I + \left(2\pi-1\right)\left(1-\kappa_I\right)q\right]}{\left(1-\kappa_I\right)\left[\left(1-\pi\right)q^2 - \pi\left(1-q\right)^2\right]} \geq \frac{\left(1-q\right)\left(1-\kappa_M\right)\left(2\pi-1\right)}{\pi\left(1-\pi\right) + \left(1-\kappa_M\right)\left[\pi^2\left(1-q\right) + \left(1-\pi\right)^2 q\right]}
$$

Cancelling the $1-q$ terms on each side and multiplying out, this becomes

$$\begin{aligned}
\pi^2(1-\pi)\kappa_I+\pi\kappa_I(1-\kappa_M)\left[\pi^2(1-q)+(1-\pi)^2q\right] \\
+(2\pi-1)\pi(1-\pi)(1-\kappa_I)q \\
+(2\pi-1)(1-\kappa_I)q(1-\kappa_M)\left[\pi^2(1-q)+(1-\pi)^2q\right] \quad &\geq \quad (1-\kappa_M)(2\pi-1)(1-\kappa_I)\left[(1-\pi)q^2-\pi(1-q)^2\right]
\end{aligned}$$

Because $\pi^2(1-\pi)\kappa_I>0$, $\pi\kappa_I(1-\kappa_M)\left[\pi^2(1-q)+(1-\pi)^2q\right]>0$, and $1-\kappa_M\in(0,1)$ we can ignore the first line on the left hand side, multiply the second line by $1-\kappa_M$, cancel out $(2\pi-1)(1-\kappa_I)(1-\kappa_M)$ on both sides and simply confirm that

$$\begin{aligned}
q\pi(1-\pi)+q\left[\pi^2(1-q)+(1-\pi)^2q\right] \quad &\geq \quad (1-\pi)q^2-\pi(1-q)^2 \\
\pi q-\pi^2q+\pi^2q-\pi^2q^2+q^2-2\pi q^2+\pi^2q^2 \quad &\geq \quad q^2-\pi q^2-\pi+2\pi q-\pi q^2 \\
0 \quad &\geq \quad -\pi+\pi q=-\pi(1-q).
\end{aligned}$$