Partisianship, Informational Cascades, and the Value of Oversight*

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Abstract

In many situations it is common knowledge that the status quo is sub-optimal. In such a situation an Executive will feel pressure to "do something" or else reveal that they do not know the correct course of action to take. This incentive can lead the Executive to take action even when their information is not good enough to justify altering the status quo. Oversight can potentially mitigate this effect. However, if the Executive is better informed than the Overseer a cascade develops rendering Oversight useless. We show that Partisianship, where the Overseer desires not only to enhance their own reputation but also to damage the Executive's, can break the cascade and make use of the Overseer's information providing a more socially efficient outcome.

1 Introduction

In many situations it is common knowledge that the status quo is not performing well. This could come as the result of an issue that was continually unaddressed in the past until it reaches National prominence (e.g. unfunded Social Security liabilities, millions of undocumented aliens), a sudden tragedy that reveals the failures of the previous policies (e.g. September 11, Enron, Katrina), or as the result of a new policy that is clearly failing (e.g. the occupation of Iraq). In each of these situations the Nation's leaders are called upon to offer a new solution as the current ones are not successful. In fact, if an issue is on the National radar it is probably because it is common knowledge that the current

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policies are not working. Of course, decisions are not as simple as just offering a "new" policy: there are usually several different policies that could be offered for each problem, and while some solutions would be beneficial there are others that would make the situation worse. We would imagine that in such a situation the costs of implementing the wrong policy may be higher than the costs of inaction for two reasons. First, taking the wrong action may move further away from the ideal policy and with concave preferences this is extremely costly. Second, if more information about the true state of the world will be revealed in future periods undoing the implementation of the wrong policy today (assuming of course the policy is even reversible) may be very costly[1] relative to the costs of waiting for better information. Consider the following examples:

1. In the aftermath of the invasion of Iraq it was clear that the policy was not succeeding. If the war is winnable then more troops would increase the probability of success. If success is not possible then the best course of action is to leave the country as soon as possible. Leaving is irreversible, so if the war was later determined to be winnable there would be no chance to change the policy. Conversely, if the war is not winnable adding more troops would only cost more lives and make the inevitable drawdown longer and more complicated. A similar argument could be made about any unsuccessful policy: it could be failing because of insufficient resources or because the policy itself is fundamentally flawed and doomed to failure.

2. Consider a foreign policy crisis (e.g. Iran or North Korean nuclear ambitions). Suppose the country may be either malicious or willing to negotiate. If the country is malicious war may be the only answer, however if they are willing to negotiate then war is avoidable. Going to war is irreversible and very costly, however if the country is truly malicious signing a treaty will result in giving aid and cover to the country to better prepare for the inevitable war.

3. There are trillions of dollars in un-funded social security liabilities. Two potential solutions might be privatization and putting more money into the program. If privatization is more efficient that should be done, however once the system is privatized it would be extremely costly to make it public again. Conversely, pouring billions of additional dollars into an inefficient program is also extremely costly. Healthcare and public schools provides similar situations.

4. Stepping away from the Governance examples, we could find

[1] Morris and Coate(1999) provide a simple model showing how new policies, if they are expected to persist, cause individuals to adjust behaviour in response and makes it costly for those individuals to move back if the policy is removed.

a similar situation in Corporate Finance when a Department is losing money. It could be that the Department could be made successful with investments - new products or marketing perhaps - or it could be that the Department is doomed to failure and should be shut down.

In all of the above examples, it is clear that the current situation is not optimal, but correcting the status quo in the wrong way may be very costly. If an Executive (most likely the President or a Governor) is acting on poor information it may well be optimal for them to stick with the status quo rather than make the situation worse by taking the wrong action. Of course, if the Executive is career minded they will be forced to take some action: since doing nothing is tantamount to admitting they are not well enough informed to implement the correct policy. This, we argue, is the rationale for Congressional Oversight on Presidential decision making: since the President is too anxious to take action to avoid revealing that she does not know what the optimal action to take is[2]. Of course, oversight is only effective when used effectively, and the Overseer, like the Executive, is probably concerned with their own reputation. As has been noted in previous papers on careerist experts (e.g. Visser and Swank, forthcoming) reputational concerns provide an incentive for experts to try to agree: a disagreement reveals that at least one expert must have the wrong signal and since the evaluator (most likely the voter) does not know which one they must lower their evaluation of both experts. Consequently, the sequential nature of Oversight, coupled with the fact that the Executive is likely to have better information in the first place (presumably this is why they are the one making the decision) makes it easy for a cascade[3] to develop, wherein the Overseer will never reveal that they disagreed with the Executive's recommendation. One way to break the cascade is with a partisan Overseer who cares not only about their own reputation, but also would like to damage the reputation of the Executive. Such an Overseer is willing to use their information because vetoing the Executive's proposal results in a larger decrease in the Executive's reputation than their own. Why? If those most skeptical of the Executive's proposal are the ones to cast the veto then vetoing the Executive's proposal reveals two pieces of information about the Overseer: that they disagreed with the Executive, and that

[2]Providing a rationale for Oversight is not, in and of itself, very difficult since adding an Overseer adds another person or group who presumably has valuable information. What is not ex-ante clear is why the result of a disagreement should be the status quo (as opposed to, for example, sending the proposal back to the Executive to decide whether to take action).

[3]Ottaviani and Sorenson(2001) introduce the notion of informational cascades, where later speakers are unwilling to reveal that they disagree with the recommendations of the earlier speakers.

they were confident in their signal. The second factor mitigates the reputational penalty the Overseer pays. Since there is no selection for the Executive, all that is learned about the Executive is that the Overseer disagreed with them and so the reputational penalty is higher[4].

This paper then shows that partisanship, while certainly harmful in some situations, can potentially serve a socially valuable purpose by breaking cascades that could develop. Among other things this provides a rationale for the well established empirical regularity that the President's party loses seats in the midterm election - as rational voters would prefer to have a partisan Congress that is willing to challenge the President. This is true even if there is no heterogeneity in preferences. More generally, we show that partisianship is a potential solution for escaping informational cascades. While most of the examples given are for political situations, one could also imagine a situation where a Manager must propose a new policy that must be accepted by their Supervisor or a Review Board before being implemented. Our results indicate that it could be optimal to stack such a board with those who have an incentive to see the Manager fail (from competing Departments perhaps) in order for the board to be willing to act on its skepticism about a given proposal.

2 Model

We consider a model where there are three possible actions $-1, 0$, and 1. 0 corresponds to maintaining the status quo, and -1 and 1 are two possible policies that could be implemented. Suppose that it is common knowledge that 0 is not the optimal policy, so the true state of the world is $\omega \in \{-1, 1\}$. Suppose the utility to the Principal (voters) if policy α is implemented when ω is the true state is $-(\alpha - \omega)^2$. This reflects the idea that there are gains from altering the sub-optimal status quo but the costs from altering it in the wrong way are higher than the benefits[5]. Suppose ex-ante that both states are equally likely so that $p(\omega = 1) = \frac{1}{2}$.[6] An Executive and an Overseer each observe a signal σ_E and σ_O respectively of the true state of the world. This signal is either perfectly accurate, or pure noise depending on their type($t_E, t_O \in \{L, H\}$). Ex-ante the probability that the Executive is the high type

[4]This assumes, of course, that the selection effect is sufficiently important. That is, that agents have private information about their own competence.

[5]Any concave utility function would work, quadratic is convenient as it allows for closed-form solutions.

[6]This assumption isolates the effects described in this paper from other biases previously identifed in the literature on careerist experts. See Levy(2007a, 2007b) and Prat(2005) for analyses of the ways in which experts' recommendations are biased when the prior is not $\frac{1}{2}$.

is $\pi \geq \frac{1}{2}$, the probability that the Overseer is the high type is $\frac{1}{2}$ and the types of the Executive and Overseer are independent. This reflects the idea that the Executive is probably better informed, and may well be more competent (since they were put in this position in the first place). As well as observing information about the state of the world the Executive and Overseer also have private information, s_E and s_O, about their type[7]. Assume that $p(s_E = H|t_E = H) = p(s_E = L|t_E = L) = p$ and $p(s_O = H|t_O = H) = p(s_O = L|t_O = L) = q$ where $p, q \in (\frac{1}{2}, 1)$. So the Executive and Overseer are not sure whether they are receiving perfect information or noise, but those who believe they are receiving good information are more likely to actually be receiving the correct signal. This information structure is the central feature of the model and, we believe, quite reasonable. An Agent who believes themselves competent or knowledgable about an issue is more likely to be competent (individuals surely have some information about their strengths and weaknesses), however, individuals can still learn about their own competence depending on the outcome of their predictions.

We assume that the first priority of both the Executive and the Overseer is to maximize their own reputation, that is maximizing the probability that they are believed to be the high type[8]. While this is the first priority, we allow both agents to place some weight on the expected outcome of the policy. We denote this weight by γ. As such, the objective of the Executive is to maximize

$$(1 - \gamma)\lambda^E - \gamma E[(\alpha - \omega)^2]$$

where λ^E reflects the ex-post probability that the Executive is the high type. We specify the same preferences for the Overseer, but allow for the possibility that the Overseer is partisan. A partisan Overseer cares not only about their reputation but also wishes to damage the reputation of the Executive[9]. We specify the objective of the Overseer

[7] In this paper we will abuse notation by using type to refer both to whether the Executives/Overseers are high or low competence (t_H or t_L), and also to refer to the signals about their type and the state of the world (s, σ).

[8] It is entirely possible that the reputational incentives could be a non-linear function of reputation. However, this assumption is not only tractable but is consistent with a politician maximizing their re-election probability where they face an unknown challenger whose quality will be uniformly distributed, and where voters always vote for the candidate believed to be the higher type.

[9] One could also conceive of a partisian Overseer who wants to enhance the reputation of the Executive (e.g. the Presidency and the Congress are controlled by the same party). Of course such an Overseer would be more reticent to reveal that they disagree with the Executive than a purely self-interested Overseer so cascades develop more easily.

as

$$(1-\gamma-\beta)\lambda^O - \beta\lambda^E - \gamma E[(\alpha-\omega)^2]$$

When $\beta = 0$ the Overseer is completely nonpartisan. We assume $\beta < \frac{1-\gamma}{2}$ so the Overseer cares more about their own reputation than the Executive's.

The timing of the game is as follows:

1. The Executive and Overseer observe (s_E, σ_E) and (s_O, σ_O) respectively.

2. The Executive proposes policy $\alpha \in \{-1, 0, 1\}$.

3. If the proposed policy is not 0 the Overseer decides whether to accept the proposed policy. If they reject the policy, then the status quo policy of 0 is implemented.

After the Overseer decides whether to reject the proposal, the Principal (voters) update their beliefs about both agents. We assume that the true state of the world is not revealed, or at least not revealed before the reputational payoff is received (not revealed until after the agents come up for re-election for example)[10].

As mentioned above, the most natural interpretation of this model is of a President requiring the approval of Congress before they can implement a policy. The sequence of moves specified in the model has the President proposing the legislation, while in practice many pieces of legislation emerge in the Congress and are either approved or vetoed by the President. However, the most important policy decisions are usually led by the White House: the War in Iraq, No Child Left Behind, Social Security Reform, Immigration, and the Bush Tax Cuts were all led by the Bush administration while Welfare Reform, Healthcare Reform, NAFTA, the War in Kosovo, were all led by the Clinton White House. As such, vesting proposal power with the Executive is a reasonable model of many of the most important decisions to be made. Finally, to avoid modeling Legislative bargaining or the strategic interation between the votes of the members - both of which are rich and complex literatures - we are treating the Congress as a single player. This basically amounts to assuming that the Congress is controlled by the Majority party, or alternatively by the median member[11] of the Congress.

[10] This assumption is important for the results, although the basic insight would go through if some information was ultimately observed. In order for the Overseer's action to reveal any information about the Executive it must be that their decision reveals information about the quality of the Executive's decision that will not be revealed otherwise. The results would go through, though not as cleanly, if imperfect information was revealed. In many situations it is reasonable to assume that the effects of a policy cannot be easily evaluated for several years.

[11] In terms of partisianship. Since there is no heterogeneity of preferences there is no notion of ideology in this model.

3 Executive Action Without Oversight

In order to consider the role of Oversight, we must compare it to the benchmark of having no Oversight. We evaluate welfare as the expected welfare of the Principal, specifically $E[-(\alpha-\omega)^2]$. Suppose there is no Oversight: the Executive proposes a policy after observing a signal about their own type and a signal of the state, and this policy is implemented. A poorly informed Executive would never reveal that they did not know the correct policy. If the primary concern of the Executive is to appear informed, the game will have many pooling equilibria. Our first result shows all equilibria must be at least partially pooling, in the sense that at least one potential policy will never be chosen.

Theorem 1 *For any π, p and any $\gamma \in (0, \frac{1}{4}\pi(2p-1)]$[12] any equilibrium will have the Executive take at most two actions in the set $\{-1, 0, 1\}$.*

See Appendix 2 for a the proof of the Theorem, as well as for a characterization of the possible equilibria. Basically, the equilibria consist of pooling either on any one action, or any two actions where those who observe $\sigma_E = 1$ take one action and those who observe -1 take the other action regardless of s_E. Since there is no opportunity to observe the outcome of the selected policy there is no opportunity for updating and the beliefs are π on path.[13]

Notice how unnatural the beliefs are in many of these equilibria. In any equilibrium other than the one where the pooling takes place on -1 and 1 at least one of those two policies is never implemented in equilibrium. The Executives who have the greatest incentive to choose such a policy are those who observed that it is the correct policy and believe themselves to be the high type. While the probability that those Executives are the high type is greater than π this equilibrium requires that, after observing such a policy, the ex-post belief about the Executive's type is lower than π. We want to focus on equilibria that have reasonable off-path beliefs. The most commonly used refinement is the Intuitive Criterion from Cho and Kreps(1987). However, when very small weight is placed on policy outcomes the Intuitive Criterion

[12] This result can be shown to hold for a wider range of parameters at the cost of additional algebra. Since we are focusing on the case where reputation is the major concern we stick to a simpler condition.

[13] The beliefs may not be exactly π. If one of the equilibrium policies is 0 and $\pi < p$ then Executives who observe $s_E = L$ would prefer, in the absense of reputational effects, to choose policy 0. So there is an equilibrium where the low types randomize making the belief after observing that 0 has been chosen lower than π. The probability of randomizing, and the difference in reputation is of γ order of magnitude. See Appendix 2 for details.

will have almost no bite. Consequently we look for Universally Divine Equilibria, following Banks and Sobel(1987)[14].

Definition 2 *(Banks and Sobel, 1987) Fix a Perfect Bayesian Equilibrium where action α is never taken. The Equilibrium is Universally Divine if for any ex-post belief about the agent $a \in \{E, O\}$ if whenever an agent of (s_a, σ_a) is weakly willing to take an off-path action α an Agent of type (s'_a, σ'_a) is strictly willing to take action α then the probability the Principal assigns to signal and type profile (s_a, σ_a) is 0.*

This means that if some action is not taken in equilibrium, if that action were ever observed, the Principal should believe the action to have been taken by the type who would take that action for the most restrictive set of beliefs the Principal could hold. This formalizes the above intuitive criticism of the equilibria that do not have -1 and 1 being played. In fact, that is the only equilibrium that is Universally Divine.

Corollary 3 *The unique Universally Divine Equilibrium for any π, p and any $\gamma \in (0, \frac{1}{4}\pi(2p-1)]$ is for the Executive to choose policy $\alpha = \sigma_E$. If no action is taken the belief about the Executive's competence is $\lambda^E = \frac{\pi(1-p)}{\pi(1-p)+(1-\pi)p}$ and if action is taken the belief is $\lambda^E = \pi$. The status quo is never chosen.*

Proof. First we verify that this is equilibrium is universally divine. Since everyone takes action and follows their signal beliefs cannot be updated. For the equilibrium to be universally divine, it must be that no action is interpreted as $t_E = L$ and so the belief that the Executive is the high type is $\lambda^E = \frac{\pi(1-p)}{\pi(1-p)+(1-\pi)p}$. We have already verified that, given $\gamma \in (0, \frac{1}{4}\pi(2p-1)]$ these beliefs support an equilibrium.

To show that this is the unique universally divine equilibrium it is sufficient, given symmetry, to show that there cannot exist a universally divine equilibrium where 1 is never played. We know from the previous theorem that such an equilibrium must have an Executive who observed signal $(s_E, \sigma_E) = (H, 1)$ must be playing either $-1, 0$, and must have a reputation no higher than π. However, if any other type is weakly willing to choose policy 1 then those who observed $(s_E, \sigma_E) = (H, 1)$ must be strictly willing to choose policy 1. So in a universally divine equilibrium

[14]The definition used in this paper corresponds to condition D1 of Cho and Kreps(1987), which they show is equivalent to Universal Divinity. This condition is a strengthening of the Intuitive Criterion which only requires that a type profile be has probability 0 if there are no beliefs which justify taking the observed action for that type but there are for a different type.

the ex-post belief must be that the Executive observed signals $(s_E, \sigma_E) = (H, 1)$, resulting in ex-post belief $\lambda^E = \frac{\pi p}{\pi p + (1-\pi)(1-p)} > \pi$ giving the Executive both a reputational and a policy incentive to deviate. Hence, there cannot be an universally divine equilibrium where 1 is never chosen. ■

We can see from the above results the value of some positive weight being placed on welfare, as it removes the unintuitive and unappealing pooling equilibrium where the Executive randomizes the policy chosen[15]. We then have the following immediate Corollary that, in the unique Universally Divine Equilibrium, action will be taken whether it is socially optimal or not.

Corollary 4 *When $p > \pi$ there is an "Overactivity Bias" where the Executive implements chooses a non-status quo policy even when the status quo is the optimal policy for the Principal.*

Proof. The probability that an Executive who observes $s_E = L$ is the high type is $P(High) = \frac{\pi(1-p)}{\pi(1-p)+(1-\pi)p}$ which is less then $\frac{1}{2}$ if and only if $p > \pi$. The probability that $\sigma_E = \omega$ is $\frac{1+P(High)}{2}$ so the expected utility to the Principal if the Executive takes action is

$$-(1 - \frac{1 + P(High)}{2})4 = -2(1 - P(High)) < -1$$

which is the utility from inaction. So action is taken when none should be. ■

What the above results reveal is that when the reputational concern of the Executive is sufficiently large, they will always follow their signal as to the state, since not altering the status quo would reveal that they do not what policy should be implemented[16]. Consequently, Executives who believe their information is too shaky to act on from a social welfare point of view will still take action to appear as though they have better information than they do. This tendency towards over-activity provides an additional rationale for oversight.

4 Nonpartisan Oversight

We now consider what would happen if the Executive's proposal was subject to review by an non-partisan Overseer, where the Overseer must

[15] Without placing any weight on policy this is a cheap talk model so such babbling equilibria must exist.

[16] Although a stronger refinement condition must be applied the logic of this result is identical to the classical Beer and Quiche example of Cho and Kreps(1987) in that the pooling must take place on the action the type all would like to claim to be prefers.

approve the proposal before it is implemented. We evaluate the welfare of any outcome as the expected welfare of the Principal, $E[-(\alpha-\omega)^2]$. We first consider the conditions under which it is beneficial for the Overseer to ever reject the Executive's policy.

Theorem 5 *If $\pi < \frac{1+2q}{2+q}$ then the utility of the Principal can be enhanced by an Overseer willing to reject the Executive's proposal. If $\pi > \frac{1+2q}{2+q}$ the Overseer cannot improve the Principal's welfare.*

Proof. Since the cost of implementing the wrong policy are -4 and the cost of the status quo is -1 the socially optimal decision for the Overseer is to reject if, based on their private information, the probability of success is less than $\frac{3}{4}$. WLOG, assume the proposed policy is 1. Then the strongest evidence against taking action 1 is when $(s_O, \sigma_O) = (H, -1)$ in which case the probability of success is

$$p(\omega = 1|(s_O, \sigma_O) = (H, -1)) = \frac{(1-q)}{q(1-\pi)+(1-q)}\frac{1+\pi}{2} = \frac{(1-q)(1+\pi)}{2(1-\pi q)}$$

which is less than $\frac{3}{4}$ if

$$\begin{aligned} 2-2q+2\pi-2\pi q &< 3-3\pi q \\ (2+q)\pi &< 1+2q \\ \pi &< \frac{1+2q}{2+q} \end{aligned}$$

■

So if the prior that the Executive is the high type is sufficiently high, the Overseer's signal should be ignored. However, when π is not too large, Oversight could potentially be beneficial. However, to be beneficial the Overseer must be willing to block proposals by the Executive that they disagree with. The following result shows that for a range of parameters this will not be possible.

Theorem 6 *If $0 < \frac{\gamma}{1-\gamma} < \frac{1}{2}(\frac{1+\pi q-2q}{1-\pi q+2q-2\pi})$ then in any equilibrium where the Executive follows their signal, the Overseer must be pooling.*

Proof. Suppose WLOG that the Executive proposes 1. Now, suppose the equilibrium is not pooling. Then there are some signals (s_O, σ_O) that will lead to rejecting and some signals that will lead to accepting. Since $\gamma > 0$ those with the greatest incentive to reject are those who observe $(s_O, \sigma_O) = (H, -1)$ in which case the probability they are the high type is $\frac{q(1-\pi)}{q(1-\pi)+(1-q)}$. Since this provides an upper-bound on the ex-post probability a rejecting Overseer is the high type we need only

show that those Overseers will not be willing to reject if that means revealing themselves to have observed signal $(s_O, \sigma_O) = (H, -1)$. Since $P(R)\lambda^O(R) + P(NR)\lambda^O(NR) = \frac{1}{2}$ if the ex-post belief that an Overseer who observed $(s_O, \sigma_O) = (H, -1)$ is below $\frac{1}{2}$ then the ex-post belief given that the proposal is not rejected must be at least $\frac{1}{2}$. So we can have only pooling equilibria if the utility from not rejecting, which must be at least

$$(1-\gamma)\frac{1}{2} - 4\gamma(1-p(w=1)) = (1-\gamma)\frac{1}{2} - 4\gamma(1-\frac{(1-q)(1+\pi)}{2(1-\pi q)}) = (1-\gamma)\frac{1}{2} - 2\gamma(1+\frac{q-\pi}{1-\pi q})$$

is greater than the utility from rejecting

$$(1-\gamma)\frac{q(1-\pi)}{q(1-\pi)+(1-q)} - \gamma.$$

That is, if

$$(1-\gamma)(\frac{1}{2} - \frac{q-\pi q}{1-\pi q}) > \gamma(2(1+\frac{q-\pi}{1-\pi q}) - 1)$$

and multiplying both sides by $2(1-\pi q)$

$$(1-\gamma)(1-\pi q - 2q + 2\pi q) > \gamma(2 - 2\pi q + 4q - 4\pi)$$

which corresponds to the condition

$$\frac{\gamma}{1-\gamma} < \frac{1}{2}(\frac{1+\pi q-2q}{1-\pi q+2q-2\pi}).$$

■

So if the weight that the Overseer places on policy is sufficiently low they will never act on their information for fear of the reputational hit associated with disagreeing with the Executive. That is, if we focus on the case where the Executive always follows their signal, which we argued in the previous section is the only outcome which is Universally Divine without Oversight, then the Overseer will never act on their information. A similar argument to the previous section shows that we should expect them to pool on always accepting the Executive's proposal.

Corollary 7 *If* $\frac{\gamma}{1-\gamma} < \frac{1}{2}(\frac{1+\pi q-2q}{1-\pi q+2q-2\pi})$ *then the unique Universally Divine Equilibrium is for the Executive to always choose policy* $\alpha = \sigma_E$ *and for the Overseer to always approve the proposal.*

Proof. It is immediate from the previous result that the strategies form a Universally Divine Equilibrium since the incentives for the Executive

have not changed from the previous Section, and the off-path beliefs $\lambda^O(R) = \frac{q(1-\pi)}{q(1-\pi)+(1-q)}$ which are consistent with Universal Divinity are sufficient to support an equilibrium.

It is also clear that any equilibrium where the pooling takes place on rejecting can never be universally divine since the beliefs about an overseer that accepts must be $\lambda^O(NR) > \pi$ so such an Overseer has both a reputational and policy incentive to approve the proposal.

Finally, we must rule out equilibria where the Executive does not follow their signal. But this is immediate since those who have the strongest incentive to propose a policy other than the status quo are those who observed that signal as well as a signal that they were the high type. Hence, the reputational hit associated with blocking a proposal in any potential universally divine equilibrium must be at least as large as if the Executive was always following their signal, so we must have the Overseer always approving any proposal in any universally divine equilibrium. Consequently the incentives for the Executive are unchanged by the existence of the Overseer so the uniqueness result from the previous section applies. ■

Section 6 provides some Examples of the parameters under which this cascade develops. The following Corollary provides a simpler criteria under which the cascade develops. Since the condition $q < \frac{1}{2-\pi}$ is satisfied whenever $q \leq \pi$ and the condition $\pi > \frac{1+2q}{2+q}$ implies that $\pi > q$ there is a non-trivial range of parameters under which a socially harmful cascade can develop if the reputational concern is sufficiently dominant.

Corollary 8 *If $q < \frac{1}{2-\pi}$ then there exists a $\bar{\gamma}$ such that for all $\gamma < \bar{\gamma}$ the Overseer will never reject the Executive's proposal.*

Proof. When $q < \frac{1}{2-\pi}, 1+\pi q-2q = 1-q(2-\pi) > 0$ so $\frac{1}{2}(\frac{1+\pi q-2q}{1-\pi q+2q-2\pi}) > 0$. Take $\bar{\gamma}$ as the solution to $\frac{\bar{\gamma}}{1-\bar{\gamma}} = \frac{1}{2}(\frac{1+\pi q-2q}{1-\pi q+2q-2\pi})$. ■

So what we have is that if the reputational concerns are sufficiently dominant then the Overseer will always rubber-stamp the Executive's proposal. Oversight can have no value in such a situation.

5 Oversight With Partisanship

First, we consider what the efficient behavior of the Overseer is. In the previous section that it is never optimal for the Overseer to reject the Executive's proposal when $\pi > \frac{1+2q}{2+q}$. When $\pi < \frac{1+2q}{2+q}$ it is socially beneficial to have the Overseer reject the Executive's proposal if they observe a signal that contradicts it and a high signal of their ability. What if they observe a low signal? Then the probability that the

proposed policy is correct is $\frac{q}{(1-q)(1-\pi)+q}\frac{1+\pi}{2} = \frac{q+\pi q}{2(1-\pi+\pi q)}$ which is greater than $\frac{3}{4}$ if and only if

$$2q + 2\pi q \geq 3 - 3\pi + 3\pi q$$

or equivalently if

$$\pi \geq \frac{3-2q}{3-q}$$

so we have the following Lemma.

Lemma 9 *When $\pi > \frac{1+2q}{2+q}$ it is optimal for the Overseer never to reject. When $\pi \in (\frac{3-2q}{3-q}, \frac{1+2q}{2+q})$ the socially optimal outcome is for Overseer to reject if $\sigma_o \neq \omega$ and $s_o = H$. When $\pi \in (\frac{1}{2}, \frac{3-2q}{3-q})$ it is optimal to reject whenever $\sigma_o \neq \omega$.*

Now we can look at whether this outcome is attainable. For the most part we are concerned with the situation where the Overseer has substantial private information about themselves so we assume that $\pi \in (\frac{3-2q}{3-q}, \frac{1+2q}{2+q})$. This corresponds to the case where q is reasonably large. Assume also that the cascade develops. We now investigate what level of β will generate the optimal decisions.

Theorem 10 *Suppose $\frac{\gamma}{1-\gamma} < \frac{1}{2}(\frac{1+\pi q-2q}{1+\pi q-2q+2\pi(1-q)})$ and $\pi \in (\frac{3-2q}{3-q}, \frac{1+2q}{2+q})$ then there exist β_* and β^* such that for all $\beta \in [\beta_*, \beta^*\ ]$ it is a Universally Divine Equilibrium for the Executive to always follow their signal and for the Overseer to reject the proposal if and only if $\sigma_o \neq \omega$ and $s_o = H$.*

Proof. WLOG assume the Executive proposes policy 1. Since in equilibrium the probability of rejecting must be increasing in the probability that proposed policy is not optimal, we must find β_* and β^* where an Overseer who observed $\sigma_o = -1$ and $s_o = H$ would prefer to reject whenever $\beta \geq \beta_*$ and an Overseer who observed $\sigma_o = -1$ and $s_o = L$ would prefer to accept whenever $\beta \leq \beta^*$.

If only those who observe the signal $(\sigma_o, s_o) = (-1, H)$ reject then we can see from the appendix that we have

$$\lambda^O(R) = \frac{q(1-\pi)}{q(1-\pi)+(1-q)}$$
$$\lambda^E(R) = \frac{(1-q)\pi}{q(1-\pi)+(1-q)}$$
$$P(R) = \frac{1-\pi q}{4}$$

since the ex-ante probability of being the high type must be the same as weighted ex-post probability of being the high type we can calculate $\lambda^O(NR)$ and $\lambda^E(NR)$ from

$$\begin{aligned}\frac{1}{2} &= P(R)\lambda^O(R) + (1-P(R))\lambda^O(NR)\\ \pi &= P(R)\lambda^E(R) + (1-P(R))\lambda^E(NR)\end{aligned}$$

so

$$\begin{aligned}\lambda^O(NR) &= \frac{4}{3+\pi q}(\frac{1}{2} - \frac{q(1-\pi)}{4}) = \frac{2-q+\pi q}{3+\pi q}\\ \lambda^E(NR) &= \frac{4}{3+\pi q}(\pi - \frac{\pi(1-q)}{4}) = \pi\frac{3+q}{3+\pi q}\end{aligned}$$

and so for the $(\sigma_o, s_o) = (-1, H)$ Overseers to be willing to reject we must have

$$(1-\beta-\gamma)\frac{q(1-\pi)}{1-\pi q} - \beta\frac{\pi(1-q)}{1-\pi q} - \gamma \geq (1-\beta-\gamma)\frac{2-q+\pi q}{3+\pi q} - \beta\pi\frac{3+q}{3+\pi q} - 2\gamma\frac{(1-q)(1+\pi)}{(1-\pi q)}$$

or equivalently

$$\begin{aligned}&\beta\\ &\geq \frac{10q\gamma - 5\gamma - 6\pi\gamma - 4q + 2\pi q + \pi^2q^2\gamma + 2\pi q^2\gamma - 2\pi^2 q\gamma + 2}{2 - 4q - 4\pi^2 q + 6\pi q}\\ &\equiv \beta_*\end{aligned}$$

In order for the $(\sigma_o, s_o) = (-1, L)$ Overseers not to be willing to reject we must have

$$(1-\beta-\gamma)\frac{q(1-\pi)}{1-\pi q} - \beta\frac{\pi(1-q)}{1-\pi q} - \gamma \leq (1-\beta-\gamma)\frac{2-q+\pi q}{3+\pi q} - \beta\pi\frac{3+q}{3+\pi q} - 2\gamma\frac{2+\pi q-q-2\pi}{(1-\pi+\pi q)}$$

or equivalently

$$\begin{aligned}&\beta\\ &\leq \frac{2\pi + 4q + 11\gamma - 11\pi\gamma - 10q\gamma + 4\pi q^2 + 2\pi^2 q - 2\pi^2 q^2 - 8\pi q - 3\pi^2 q^2\gamma + 2\pi^2 q^3\gamma + 3\pi^3 q^2\gamma - \pi^3 q^3}{(1-\pi+\pi q)(4q + 4\pi^2 q - 6\pi q - 2)}\\ &\equiv \beta^*\end{aligned}$$

Finally, we must verify that the Executive will still always follow their signal, and never choose policy 0. We can then calculate the ex-post belief about the Executive after not submitting a proposal, having the proposal accepted and having the proposal accepted respectively:

$$\lambda^E(Non) = \frac{\pi(1-p)}{\pi(1-p)+(1-\pi)p}$$
$$\lambda^E(R) = \frac{(1-q)\pi}{q(1-\pi)+(1-q)}$$
$$\lambda^E(NR) = \frac{\pi - P(R)\lambda^E(R)}{1-P(R)} = \frac{\pi - \frac{1-\pi q}{4}\frac{\pi(1-q)}{1-\pi q}}{\frac{3+\pi q}{4}} = \frac{\pi\,(3+q)}{3+\pi q}$$

Since those with the least accurate signals are also the ones most likely to have their proposal rejected we need only check that an Executive who observed signal $(s_E, \sigma_E) = (L, 1)$ would rather propose 1 than 0. The probability of the proposal being rejected given that $s_E = L$ so the updated probability that the Executive's signal is correct is $\frac{\pi(1-p)}{1-\pi p}$ and so the probability of rejecting is $\frac{1-\frac{\pi(1-p)}{1-\pi p}q}{4} = \frac{1-\pi p-\pi q+\pi qp}{4(1-\pi p)}$. So the expected ex-post belief for an Executive who observes $s_E = L$ is

$$\frac{(1-q)\pi}{q(1-\pi)+(1-q)}\frac{1-\pi p-\pi q+\pi qp}{4(1-\pi p)}+\frac{\pi\,(3+q)}{3+\pi q}(\frac{3(1-\pi p)+\pi q-\pi qp}{4(1-\pi p)})$$

■

So we have established that in situations where cascades develop rendering non-partisian oversight useless, there are a range of parameters where it is an equilibrium for a partisian Overseer to behave in the the way that is socially optimal. What happens if there is partisanship that is not within this range? Clearly for a very low level of partisanship there would be no effect. Once partisanship gets sufficiently large, however, Overseers begin rejecting. This is beneficial provided there is not too much partisanship.

Theorem 11 *Suppose* $\frac{\gamma}{1-\gamma} < \frac{1}{2}(\frac{1+\pi q-2q}{1+\pi q-2q+2\pi(1-q)})$ *and* $\pi \in (\frac{3-2q}{3-q}, \frac{1+2q}{2+q})$ *then there exist* $\check{\beta}$ *and* $\hat{\beta}$ *such that the partisan equilibrium performs weakly better for all* $\beta \in (0, \hat{\beta})$*, and strictly better on* $(\check{\beta}, \hat{\beta})$ *than non-partisanship.*

Proof. If the Overseer rejects with arbitrarily small probability then the beliefs if not rejected are arbitrarily close to

$$\lambda^O(NR) = \frac{1}{2}$$
$$\lambda^E(NR) = \pi$$

so in order for an Overseer with signals $(\sigma_o, s_o) = (-1, H)$ to be willing to be reject with any probability we must have

$$(1-\beta-\gamma)\frac{q(1-\pi)}{1-\pi q}-\beta\frac{\pi(1-q)}{1-\pi q}-\gamma \geq (1-\beta-\gamma)\frac{1}{2}-\beta\pi-2\gamma\frac{(1-q)(1+\pi)}{(1-\pi q)}$$

or equivalently

$$\begin{aligned}(1-\gamma)(\frac{q(1-\pi)}{1-\pi q}-\frac{1}{2})+2\gamma\frac{(1-q)(1+\pi)}{(1-\pi q)}-\gamma &\geq \beta(\frac{q(1-\pi)}{1-\pi q}+\frac{\pi(1-q)}{1-\pi q}-\frac{1}{2}-\pi)\\ -(6q\gamma-3\gamma-4\pi\gamma-2q+\pi q+\pi q\gamma+1) &\geq -\left(2q+2\pi^2 q-3\pi q-1\right)\beta\\ \beta &\geq \frac{6q\gamma-3\gamma-4\pi\gamma-2q+\pi q+\pi q\gamma+1}{1+3\pi q-2q-2\pi^2 q}\equiv\check{\beta}\end{aligned}$$

■

Finally, we can compare the equilibria when π is low. Then partisanship is always beneficial.

Theorem 12 *Suppose* $\frac{\gamma}{1-\gamma} < \frac{1}{2}(\frac{1+\pi q-2q}{1+\pi q-2q+2\pi(1-q)})$ *and* $\pi \in (\frac{1}{2}, \frac{3-2q}{3-q})$ *then more partisanship results in a better equilibrium.*

6 An Example

We now consider a simple example to show that the cascade can develop for reasonable parameters. Consider a situation where $q = \pi = 0.8$. Since $0.8 < \frac{1}{2-0.8}$ we have that a cascade develops if γ is sufficiently low. In fact a cascade develops if

$$\frac{\gamma}{1-\gamma} \leq \frac{1}{2}(\frac{1+0.8^2-2(0.8)}{1+0.8^2-2(0.8)+2(0.8)(1-0.8)}) = \frac{5}{99}$$

or if $\gamma \leq \frac{5}{104} = 0.048$.

So consider the case where $\gamma = \frac{1}{40} = 0.025$. Since $\pi = 0.8 \in (\frac{1.4}{2.2}, \frac{2.6}{2.8}) = (\frac{3-2q}{3-q}, \frac{1+2q}{2+q})$ it is optimal to have the Overseer reject if and only if they received a contradictory signal and believed themselves to be the high type. Plugging into the above formulas we see that this can be achieved for $\beta \in [\beta_*, \beta^*\,]$ where

$$\begin{aligned}&\beta_*\\ &= \frac{10(0.8)(0.025)-5(0.025)-6(0.8)(0.025)-4(0.8)+2(0.8)^2+(0.8)^4(0.025)+2(0.8)^3(0.025)-2}{2-4(0.8)-4(0.8)^3+6(0.8)^2}\\ &= 0.0764\end{aligned}$$

and

$$\beta^*$$
$$= \frac{2(0.8) + 4(0.8) + 11(0.025) - 11(0.8)(0.025) - 10(0.8)(0.025) + 4(0.8)(0.8)^2 + 2(0.8)^2(0.8) - 2(0.$$

$$= 0.155\,47$$

And finally, we can see that there is benefit from Partisanship where $\beta \in (\check{\beta}, \hat{\beta})$

$$\check{\beta} = \frac{6(0.8)(0.025) - 3(0.025) - 4(0.8)(0.025) - 2(0.8) + (0.8^2) + (0.8^2)(0.025) + 1}{1 + 3(0.8)^2 - 2(0.8) - 2(0.8)^3} = 0.709$$

So we have that for reasonable parameters, a cascade develops where the Overseer is unwilling to reject the proposal even if they believe the proposal is misguided, unless they are partisan.

7 Conclusion

In this paper we have presented a model of Executive action and Oversight. We showed that there could be an over-activity bias wherein the career motivated Executive takes unwarranted action to avoid revealing that they are uncertain as to the correct course of action. While Oversight can provide a solution to this problem, under reasonable conditions a cascade will develop where the Overseer is unwilling to challenge the Executive's proposal since revealing disagreement shows that at least one must be wrong and consequently the ex-post belief about both the Executive and the Overseer's competence is degraded. We showed that partisanship can be beneficial by making the Overseer more willing to challenge the Executive, and so increasing the effectiveness of the Oversight regime. In addition to the theoretical result that partisanship can serve to break a cascade, this provides a rationale for the well established empirical regularity that the party that does not control the Presidency usually wins seats in the midterm elections. While many have speculated on the dangers of having the Presidency and Congress in the same hands[17], in effect turning the Congress into a rubber stamp of the President's policies, career concerns can generate the same effect even if the Congress is completely nonpartisan. So we have the surprising result that a partisan Overseer can out-perform a nonpartisan one.

One interesting feature of the model of partisanship developed in this paper is that, since there is no heterogeneity of preferences, there is no

[17]See, for example, Levinson and Pildes(2006): "The concern being that when government is unified, the Congress will hesitate to critique the President, regardless of wether the policies proposed by the President are unwise, illegal or both."

notion of ideology, which is typically what gives rise to partisanship. In this way the rationale for divided government is very different than posited by Fiorina(1992) and Alesina and Rosenthal(1989, 1995) where voters seek to balance the power of two parties with policies that are exogenously given to be different from the median. In this model, such exogenous parties are not needed. We could imagine that partisanship reflects the coalitions that emerge from bargaining over the spoils in the standard legislative bargaining models, or for providing a rationale for two parties and an incentive to vote even in the face of Downsian convergence. In reality, of course, parties reflect different constituencies and approaches so there is usually a "Republican" and a "Democrat" way to approach most problems. We view the incorporation of different ideological biases into the framework presented in this paper to be an interesting avenue for future research.

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9 Appendix 1

For ease of exposition we calculate the updated probabilities after each signal observed by the Overseer given that the Executive has proposed 1 in the appendix to be used in the proofs in the text. This assumes that the Executive is always acting and following their signal.

$$P(t_O = H|s_O = H, \sigma_O = -1) = \frac{q(\frac{1-\pi}{2})}{q(\frac{1-\pi}{2}) + \frac{1-q}{2}} = \frac{q(1-\pi)}{q(1-\pi) + (1-q)}$$

$$P(t_O = H|s_O = L, \sigma_O = -1) = \frac{(1-q)(\frac{1-\pi}{2})}{(1-q)(\frac{1-\pi}{2}) + \frac{q}{2}} = \frac{(1-q)(1-\pi)}{(1-q)(1-\pi) + q}$$

$$P(t_O = H|s_O = H, \sigma_O = 1) = \frac{q(\frac{1+\pi}{2})}{q(\frac{1+\pi}{2}) + \frac{1-q}{2}} = \frac{q(1+\pi)}{q(1+\pi) + (1-q)}$$

$$P(t_O = H|s_O = L, \sigma_O = 1) = \frac{(1-q)(\frac{1+\pi}{2})}{(1-q)(\frac{1+\pi}{2}) + \frac{q}{2}} = \frac{(1-q)(1+\pi)}{(1-q)(1+\pi) + q}$$

When a -1 is observed the probability that the state is 1 is then $(1-P(t_O = H))\frac{1+\pi}{2}$ and when 1 is observed the probability is $(1-P(t_O = H))\frac{1+\pi}{2} + P(t_O = H)$. That is

$$P(1|s_O = H, \sigma_O = -1) = \frac{(1-q)}{q(1-\pi) + (1-q)}\frac{1+\pi}{2}.$$

$$P(1|s_O = L, \sigma_O = -1) = \frac{q}{(1-q)(1-\pi) + q}\frac{1+\pi}{2}$$

$$P(1|s_O = H, \sigma_O = 1) = \frac{2q(1+\pi) + (1-q)(1+\pi)}{2[q(1+\pi) + (1-q)]}$$

$$P(1|s_O = L, \sigma_O = 1) = \frac{2(1-q)(1+\pi) + q(1+\pi)}{2[(1-q)(1+\pi) + q]}$$

We can also calculate the probability that each signal is observed.

$$P(s_O = H, \sigma_O = -1) = P(s_O = H)P(\sigma_O = -1|s_O = H) = \frac{1}{2}(q\frac{1-\pi}{2} + \frac{1-q}{2}) = \frac{1-\pi q}{4}$$

$$P(s_O = L, \sigma_O = -1) = \frac{1}{2}(\frac{q}{2} + (1-q)\frac{(1-\pi)}{2}) = \frac{1-\pi(1-q)}{4}$$

$$P(s_O = H, \sigma_O = 1) = \frac{1}{2}(q\frac{1+\pi}{2} + \frac{1-q}{2}) = \frac{1+\pi q}{4}$$

$$P(s_O = L, \sigma_O = 1) = \frac{1}{2}(\frac{q}{2} + \frac{(1-q)(1+\pi)}{2}) = \frac{1+\pi(1-q)}{4}$$

Finally, we can calculate the probability that an Executive, who observed a signal of 1 is given each signal profile using the formula $P(t_E = H|s_E = \omega) = \frac{\pi}{\pi+(1-\pi)\frac{1}{2}} = \frac{2\pi}{1+\pi}$ and so

$$P(t_E = H|s_O = H, \sigma_O = -1) = \frac{(1-q)\pi}{q(1-\pi)+(1-q)}.$$

$$P(t_E = H|s_O = L, \sigma_O = -1) = \frac{q\pi}{(1-q)(1-\pi)+q}$$

$$P(t_E = H|s_O = H, \sigma_O = 1) = \frac{2q(1+\pi)+(1-q)(1+\pi)}{[q(1+\pi)+(1-q)]}\frac{\pi}{1+\pi}$$

$$P(t_E = H|s_O = L, \sigma_O = 1) = \frac{2(1-q)(1+\pi)+q(1+\pi)}{[(1-q)(1+\pi)+q]}\frac{\pi}{1+\pi}$$

10 Appendix 2

Parameters

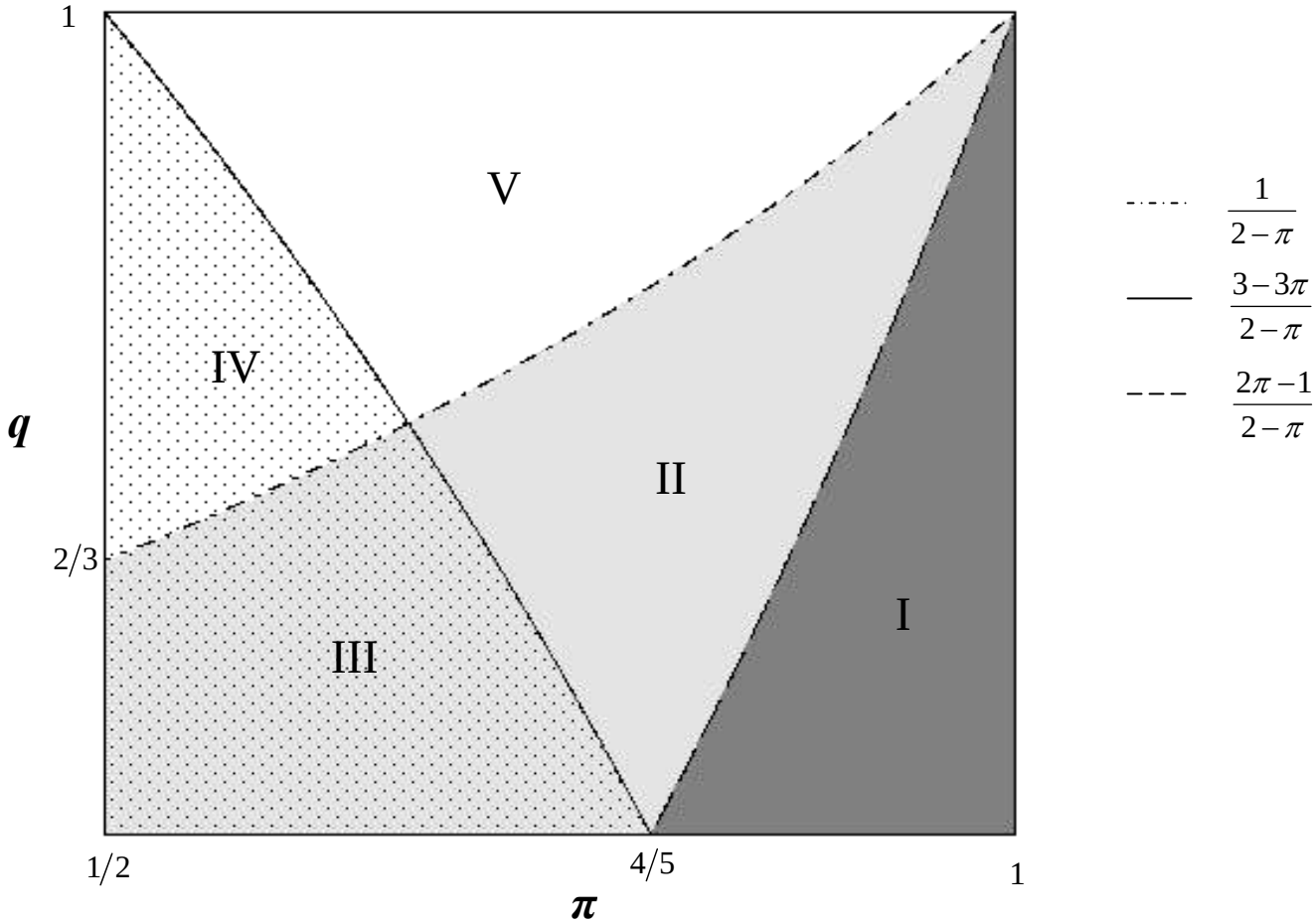
π	probability executive is high quality
p	accuracy of executive's signal about his quality
q	accuracy of overseer's signal about her quality
λ_E	weight executive attaches to policy
λ_O	weight overseer attaches to policy
β	weight overseer attaches to executive's reputation

Private Information

$s_E \in \{L, H\}$	executive's signal about her competence
$\sigma_E \in \{-1, 1\}$	executive's signal about the state of the world
$s_O \in \{L, H\}$	overseer's signal about her competence
$\sigma_O \in \{-1, 1\}$	overseer's signal about the state of the world

Actions

$\alpha \in \{-1, 0, 1\}$	policy choice of the executive
$v \in \{\text{reject, accept}\}$	veto decision of overseer



Region I: Principal never wants overseer to veto, the overseer suffers a reputational penalty from exercising veto

Region II: Principal wants overseer to veto if and only if overseer believes that she is the high type and her signal disagrees with the executive's policy choice; the overseer suffers a reputational penalty from exercising veto.

Region III: Principal wants overseer to veto if and only if her signal disagrees with executive's policy choice; the overseer suffers a reputational penalty from exercising veto.

Region IV: Principal wants overseer to veto if and only if her signal disagrees with executive's policy choice; the overseer's reputation is enhanced by exercising veto.

Region V: Principal wants overseer only to veto if and only if the overseer believes that she is the high type and her signal disagrees with executive's policy choice; the oversseer's reputation is enhanced by exercising veto.