

Whose Ear to Bend? Information Sources and Venue Choice in Policy-Making*

Frederick J. Boehmke¹, Sean Gailmard² and John Wiggs Patty³

¹*Department of Political Science, University of Iowa*

²*Department of Political Science, Northwestern University*

³*Department of Government, Harvard University*

ABSTRACT

Important conceptualizations of both interest groups and bureaucratic agencies suggest that these institutions provide legislatures with greater information for use in policy-making. Yet little is known about how these information sources interact in the policy process as a whole. In this paper we consider this issue analytically, and develop a model of policy-making in which multiple sources of information – from the bureaucracy, an interest group, or a legislature’s own in-house development – can be brought to bear on policy. Lobbyists begin this process by selecting a venue – Congress or a standing bureaucracy – in which to press for a policy change. The main findings of the paper are that self-selection of lobbyists into different policy-making venues can be informative per se, and that this self-selection can make legislatures prefer delegation to ideologically distinct bureaucratic agents over ideologically close ones. Changes within the Federal Trade Commission during the 1970s are reinterpreted in the context of our model.

The complexities of policy-making in industrialized societies, and the informational demands this complexity places on policy-makers, are apparent and well known to observers of the policy process. Indeed, some of the most important and conspicuous institutions we observe in the American policy process – legislative committee structure, bureaucratic agencies, interest group lobbying – have been interpreted and rationalized in the scholarly literature as devices that elected policy-makers use to acquire information

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and expertise, or leverage it for use in policy-making. For example, congressional committees as well as interest groups have been cast as providers of information before legislation is enacted.¹ Bureaucratic agencies have been presented as sources of the same kind of policy-relevant expertise, making use of it after the enactment of enabling statutes in standard models of delegation.²

Previous research has therefore provided many informative and interesting insights into the role of specific institutional arrangements in policy-making. What is not yet clear, however, is how these institutions fit together as information providers in the policy process – not as a series of individual pieces on “Congress and ...”, but as an integrated whole.³ Understanding how these institutions interact with each other is central to the development of a general institutional theory of policy-making. In particular, theories of legislative–bureaucratic relations that ignore the role of interest groups and nongovernmental actors generate predictions that, although potentially important and informative, are only partial equilibrium in nature.

For example, a common theme through most current models of delegation is that the discretion granted to an agent is an increasing function of the agent’s ideological affinity with the principal.⁴ According to this logic, one might infer that an agency that has been granted higher discretion is ideologically more similar to the legislature than one with less discretionary authority. Agencies only get wide latitude when they want to use it in the same way the legislature would, were it similarly informed. One of the central findings of this paper is that this inference is not necessarily valid once one considers the legislature’s need to design agencies that elicit the voluntary provision of policy information by nongovernmental actors.⁵

We focus on the legislature’s incentives when confronted with an interest group that is informed about policy consequences and can choose whether to petition for review of a policy. We begin our analysis with a lobbyist’s choice of whether to seek desired policy outcomes through legislative enactment or agency actions, if at all. The reason for this starting point is the pervasive diffusion of policy-making authority in the United States

¹ Gilligan and Krehbiel (1987, 1990) and Krehbiel (1991) present committees as devices for in-house expertise development in legislatures. Ainsworth (1993), Ainsworth and Sened (1993), and Kollman (1998) advance related views of informational lobbying, where groups provide information about policy consequences or constituent preferences and salience.

² Bawn (1995) and Epstein and O’Halloran (1994, 1999) developed a basic modeling framework for studying discretion, preferences, and expertise in bureaucratic agencies.

³ Needless to say, there are important paradigms on the interaction of legislatures, agencies, and interest groups in the policy process, notably McCubbins, Noll, and Weingast (1987, 1989), McCubbins and Schwartz (1984), and the harried but durable idea of “iron triangles” or subgovernments. But these views do not emphasize the role of all these institutions as simultaneous providers of information to elected policy-makers, which is one of our points in this paper.

⁴ This theme can be seen in various guises in many models of delegation, including Krehbiel (1991), Epstein and O’Halloran (1994, 1999), Gailmard (2002), Huber and Shipan (2002), and Bendor and Meirowitz (2004).

⁵ Carpenter (2001) also argues that the inference is invalid, because agencies themselves may (under conditions Carpenter specifies) compel a legislature to grant policy authority, rather than waiting passively for it to be granted. Our argument complements Carpenter’s in that we assume that the legislature controls the agency design process.

across branches of government, a major trend in public policy over the last century.⁶ This diffusion means that, in many cases, new policy proposals of broad scope can be advanced either by the legislature, or by a bureaucracy with a corps of lawyers skilled in finding the requisite authority in enabling statutes. It is not always the case that Congress imposes meaningful restrictions on bureaucratic policy-making and leaves agencies only the blanks to be filled in by bureaucratic agencies.

This diffusion creates a nontrivial venue choice problem for lobbyists: the first decision about legislative lobbying for a well-informed interest group is whether to do it at all, when the bureaucratic venue may be more favorable toward some desired policy change. Rational choice by lobbyists combined with asymmetric information implies that venue choice per se is potentially informative, above and beyond the content of any messages sent to the chosen venue. Our first set of results explores the information content of venue choice behavior.

The policy choices, and therefore preferences, of the bureaucratic agent have a crucial effect on how the group's information is used in the policy process, and in particular, whether the group participates. This then leads to a second set of results, addressing the legislature's "optimal delegation" problem: legislative preferences over agency policy choices. In particular, we examine the *ally principle*, which states that the legislature prefers "the most ideologically similar agent" (Bendor and Meirowitz 2004, p. 293) – that the legislature weakly prefers an agency with preferences closer to the legislature's than one with preferences further away.⁷ The ally principle is not generally robust to the inclusion of voluntary venue choice/policy activation by nongovernmental actors, even in a one-dimensional policy space with additive random shocks. Although the legislature obviously prefers to appoint the agency that results in *policy outcomes* that are the most ideologically preferred, achieving preferred outcomes often involves appointing an agency with preferences that are distinct from the legislature's. If the legislature in the optimal delegation problem chooses an agent with preferences exactly like its own, it gets policy it likes, provided the interest group prefers policy change. But by strategically choosing departures of the agency's preferences from its own, the legislature can induce more types of groups to lobby for policy change in the first place, at the cost of some loss in policy utility in states where the group would have lobbied even the legislature or its clone in the bureaucracy. The optimal agency design process requires reconciling this tradeoff, and generally, the resolution does not result in a "perfect" agent, an ideological clone of the legislature.

Overall, the results show that the interaction of multiple institutions in the policy process has important implications for the informational roles that each plays in that process – and therefore how we explain their existence and structure, both positively and

⁶ Diffusion across levels of America's federal structure are similarly notable, but not our focus in this paper.

⁷ This result – which should not be confused with a result of the same name in the theoretical lobbying literature – traces its formal roots to the seminal work of Crawford and Sobel (1982). Bendor and Meirowitz, who named it in the context of delegation models, refer to it as a "classical feature" (p. 293) and an "ancient political principle" (p. 299).

normatively. We develop the rest of our argument as follows. The first section lays out the theoretical model and characterizes the different classes of equilibria that may result. The second section analyzes legislative preferences over agent ideal points in the venue choice model, whereas the third section takes up the same issue in the special case in which outcomes equal policies plus noise. The fourth section interprets several notable changes in the Federal Trade Commission in the 1970s in light of the model.

THEORY

In our model, there are three players: a group G , a bureaucrat B , and a legislature L . The space of possible policies is denoted by X , with the prevailing status quo policy denoted by $y \in X$. In addition, there is a set of states S . The state is realized according to a distribution with cumulative distribution function F and probability density (or mass, if S is finite) function f with full support on S . Each players' payoffs depend on both states and policies. In particular, the payoff of player i is denoted by $u_i : X \times S \rightarrow \mathbf{R}$. We assume that for each given state s , each player i 's preferences possess a unique policy, $x_i^*(s) \in X$, such that $u_i(x_i^*(s), s) \geq u_i(x, s)$ for all policies x in X . We refer to this policy as player i 's *conditional ideal point*. Additionally, we assume that $u_L(x, s)$ is a strictly concave function of x for all $s \in S$. This assumption is consistent with many models of delegation in political settings and is not central to our results but simplifies the exposition greatly.⁸

We assume that whereas G and B know the state s , L can learn the state only by holding hearings. Holding hearings reduces the legislature's payoff by an exogenously fixed cost $c \geq 0$.⁹ We take this approach to make the implications of asymmetric information more transparent.

Upon realization of the state s according to F , the group chooses whether to initiate review of the status quo (which we sometimes refer to as "lobbying," as the group is attempting to have its concerns addressed by the government) with the bureaucrat (denoted by $a_G = B$), the legislature (denoted by $a_G = L$), or neither (denoted by $a_G = N$). If the group initiates the policy change process with the bureaucrat, the bureaucrat chooses a policy in X based on its knowledge of s , and the game concludes.¹⁰ If the group initiates the process with the legislature, then the legislature chooses whether to incur the cost c to find out the true state. Denote this decision by $a_L \in \{1, \emptyset\}$, with $a_L = 1$

⁸ Specifically, it ensures the existence of a pure strategy that an uninformed legislature weakly prefers to any mixed strategy.

⁹ This is in contrast to Gordon and Hafer (2005), in which the lobbyist is more informed than the bureau about decision-relevant information. They model the lobbyist's signals to a regulatory agency about its willingness to fight adverse rulings. It also contrasts with the work of Sloof (1998), in which the bureaucracy can be informed about the true state of nature by the lobbyist, and the bureaucracy has a greater degree of information than does the legislature about the motivations of the lobbyist.

¹⁰ That is, for simplicity, we examine the case where the bureaucrat is given full discretion by the legislature. Bennedsen and Feldmann (2005) examine the effects of lobbying in bureaucracies on the extent of discretion granted by the legislature, but venue choice is not a concern in their paper.

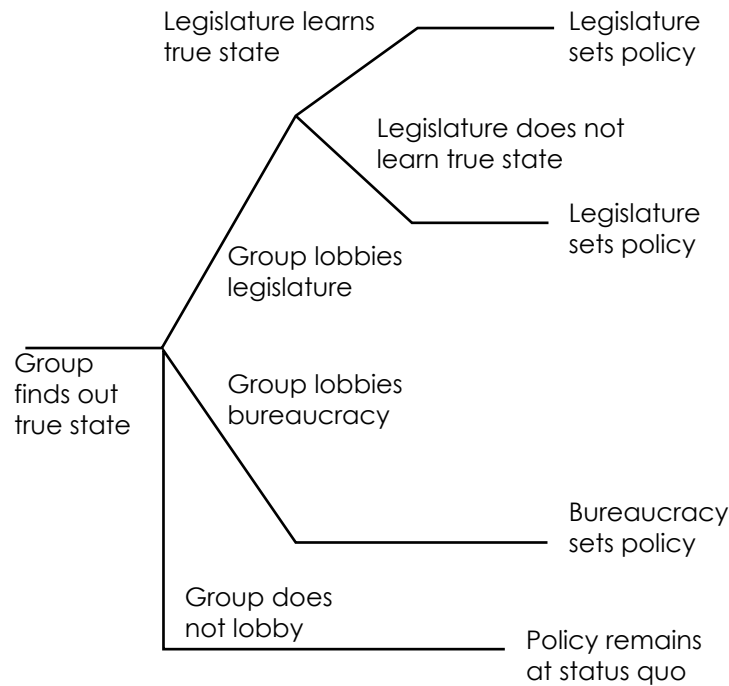


Figure 1. A model of policy-making and venue choice

representing the decision to hold hearings and $a_L = \emptyset$ denoting the choice to make policy without holding hearings. Following this decision, the legislature updates its beliefs and chooses any policy in X , and the game concludes. If the group initiates the process with neither B nor L , the status quo y remains in force and the game concludes. The informational structure and payoff functions of all of the players are common knowledge. Figure 1 displays the game form.

It is worth commenting on several aspects of the extensive form.

1. *The status quo and activational lobbying.* Certainly, the right of the group to lobby for policy changes cannot be disputed. The first amendment gives them the right to seek redress of grievances with the Government; the Administrative Procedure Act (§553(e)) gives affected parties “the right to petition for the issuance, amendment, or repeal of a rule” made by an agency. We assume more than just the right to petition: neither the agency nor the legislature can change the status quo y unless the group requests review of the policy in that venue – essentially, it activates them.¹¹ One way to view this assumption is that the status quo y reflects policy as it would be made

¹¹ One extension would involve refining the set of equilibria by requiring that y is a best response by the legislature conditional on the group choosing not to lobby in either venue. This would eliminate

without the group's involvement. The policy process may still proceed; it simply results, through an unmodeled process, in the common knowledge outcome y . Such a policy may respond to unorganized interests or other political activities, or it may literally represent no change in policy.¹²

2. *Restriction of the group's menu of venue choices.* The extensive form explicitly precludes the group from lobbying *both* the legislature and the bureaucracy. Thus, a natural question is what happens if this restriction is removed. However, relaxing this feature of the game form is not fully accomplished by simply including a fourth branch in the group's venue decision. The legislature would need to specify which venue actually has authority if both attempt to change the policy. Choosing the correct specification for this aspect of the enlarged game is itself an open research question. A strict interpretation of the Constitution suggests that the legislature is supreme, and that its policy decision supersedes that made by a bureaucratic agency. This interpretation of the effect of lobbying both venues results in the choice of lobbying both venues being equivalent to lobbying only the legislature.
3. *Ex post legislative oversight.* Our game form rules out the possibility of ex post legislative oversight of policy changes approved by the bureaucratic agency. Allowing the legislature to overrule the agency's policy decision greatly complicates the development of a complete model. This complication can occur in at least two ways. First, suppose that, in equilibrium, the legislature's response is to overrule the agency with certainty in some (or all) cases in which the agency is lobbied. The supposition that this is part of *equilibrium* behavior implies that the group would be able to infer that this oversight would occur upon lobbying the bureaucracy, after which the effect would have been equivalent to lobbying the legislature. The second complication follows from this logic – such oversight would imply that the agency's preferences differ from those of the legislature in those states in which ex post legislative oversight would occur. Accordingly, the bureaucracy would no longer have an incentive to sincerely implement its state-contingent ideal policy. Such a model is potentially very interesting, but raises issues requiring much more space to address in an adequate fashion.

any question about what would happen in the model if the legislature could alter y following a choice by the group not to lobby at all; by definition the legislature would want to do nothing in a sequentially rational strategy. For technical reasons, the most direct way to do that would be to include the status quo policy in the equilibrium profile itself (otherwise it is possible that no equilibria would satisfy such a requirement for a given y). For simplicity, however, we presume that y represents the equilibrium outcome of whatever policy processed unfold after the group decides to abstain from lobbying.

¹² An alternative interpretation is that activation lobbying endows the group with some degree of gatekeeping power. Though this is not a good generic description of the policy process, it is a realistic depiction of decision-making in many policy areas. The number of potential issues that might be addressed by either the legislature or a bureaucratic agency greatly exceeds the number of issues that the legislature or agency can address (cf. Baumgartner and Jones 1993). Without activation by a group, the issue and options to address it may simply fly under the policy-making radar.

Equilibrium

Our notion of equilibrium is perfect Bayesian equilibrium (PBE). Accordingly, the players have beliefs about each others' strategies as well as the true state s along all possible paths of the game tree. Each players' beliefs about the others' strategies are required to be correct along any path of play reached with positive probability in a PBE. The key use of the beliefs in our model is by L , who must infer the states s in which the group approaches it instead of the bureaucrat. These beliefs determine whether L should incur the cost of obtaining knowledge of the true state s and, if not, what policy it should set. In a PBE, these beliefs depend on the strategies chosen by the group and the bureaucrat and, hence, depend on both F and the status quo policy, y .

The strategy of L is then a probability of gathering information and a response by the legislature, conditional upon either not gathering information or upon the information it obtains. The probability of gathering information is denoted by p_L . Thus, the legislature holds hearings and finds out the true state with probability p_L , and does not hold hearings (denoted by \emptyset) with probability $1 - p_L$. The legislature then chooses a policy according to a mapping σ_L from $\{\emptyset\} \cup S$ into probability distributions over X . In particular, L chooses a (possibly mixed) strategy over the space of possible policies based on whether it incurred the cost to find out the state, s . Thus, $\sigma_L(\emptyset)$ represents the strategy of L when it does not procure the information; for all states s , $\sigma_L(s)$ represents the probability distribution over X conditional on L procuring the information in state s . The strategy of the bureaucrat is simply a mapping, σ_B from S into probability distributions over X . The strategy of the group is a mapping σ_G from S into Δ , where Δ is the two-dimensional simplex – the space of triples of nonnegative real numbers that sum to 1. Thus for any state s , $\sigma_G(s) = (\sigma_G^L(s), \sigma_G^B(s), \sigma_G^N(s))$, representing the probability with which the group approaches the legislature, approaches the bureaucrat, and approaches neither, respectively, conditional on the realization of the state, s .

Conditional upon the group lobbying the legislature, the legislature's beliefs are a probability distribution over S , denoted by μ . We do not deal with the other players' beliefs, as they place probability one on the true state s in any PBE, given our informational structure.

The group's expected utility, conditional on the realized state s , is

$$v_G(\sigma, s) = \sigma_G^L(s) \left[p_L \int_X u_G(z, s) \sigma_L(z, s) dz + (1 - p_L) \int_X u_G(z, s) \sigma_L(z|\emptyset) dz \right] \\ + \sigma_G^B(s) \int_X u_G(z, s) \sigma_B(z, s) dz + \sigma_G^N(s) u_G(y, s)$$

The bureaucrat's expected utility, conditional on being lobbied by the group, is

$$v_B(\sigma, s | a_G = B) = \int_X u_B(z, s) \sigma_B(z, s) dz$$

The legislature's expected utility, conditional on being lobbied by the group, choosing to pay the cost c and finding out the true state s , is

$$v_L(a_L = 1, \sigma_L(s), \sigma_G, \sigma_B | a_G = L) = \int_X u_L(z, s) \sigma_L(z, s) dz - c$$

The legislature's expected utility, conditional on being lobbied by the group and choosing not to procure information, is

$$v_L(a_L = \emptyset, \sigma_L(\emptyset), \sigma_G, \sigma_B | a_G = L) = \int_S \int_X u_L(z, t) \mu(t) \sigma_L(z | \emptyset) dz dt$$

With the expected utilities of each player now defined, we can define a perfect Bayesian equilibrium of this game. We denote the set of probability distributions over X by $\mathcal{P}(X)$. Given the use of perfect Bayesian equilibrium, an equilibrium consists of both a profile of strategies (σ^*, p_L^*) and a set of posterior beliefs for the legislature μ . Accordingly, for simplicity, we denote a *strategy-belief profile* by $\phi = (\sigma, p_L, \mu)$.

Definition 1 A perfect Bayesian equilibrium (PBE) is a strategy-belief profile $\phi^* = (\sigma^*, p_L^*, \mu)$ such that

- $\forall s, \sigma_G^*(s) \in \arg \max_{\alpha \in \Delta} v_G(\alpha, \sigma_L^*, \sigma_B^*, s)$
- $\forall s, \sigma_B^*(s) \in \arg \max_{\beta \in \mathcal{P}(X)} v_B(\beta, \sigma_L^*, \sigma_G^*, s)$
- $\forall s, \sigma_L^*(s) \in \arg \max_{\gamma \in \mathcal{P}(X)} v_L(1, \gamma, \sigma_G^*, \sigma_B^* | a_G = L)$
- $\sigma_L^*(\emptyset) \in \arg \max_{\delta \in \mathcal{P}(X)} v_L(\emptyset, \delta, \sigma_G^*, \sigma_B^* | a_G = L)$
- $p_L^* \in \arg \max_{\rho \in [0,1]} \rho \int_S v_L(1, \sigma^* | a_G = L) \mu(s) ds + (1 - \rho) v_\emptyset(0, \sigma^* | a_G = L)$
- If $\int_S f(t) \sigma_G^{L,*}(s) dt > 0$, then $\mu(s) = \frac{f(s) \sigma_G^{L,*}(s)}{\int_S f(t) \sigma_G^{L,*}(t) dt}$.

Otherwise μ is any probability distribution on S .

Equilibrium values of $\sigma_L^*(s)$ are straightforward – given that the legislature knows the state, it just picks its most preferred policy. The interesting parts of the legislature's problem are the probability p of buying information and the choice of policy when the state is not known with certainty $\sigma_L(\emptyset)$. Our assumption that $u_L(x, s)$ is strictly concave ensures that $\sigma_L^*(\emptyset)$ is a degenerate distribution determined by the legislature's beliefs μ . Therefore, in equilibrium, we represent $\sigma_L^*(\emptyset)$ by its unique mass point, denoted by $\tilde{x}_L^*(\mu)$. These elements of the legislature's strategy determine the lobbyist's incentives. Similarly, the equilibrium values of $\sigma_B(s)$ are straightforward: the bureaucrat simply implements its most preferred policy, $x_B^*(s)$, if lobbied by the group.

The logic of an equilibrium strategy for the group is simple. Given the strategies of the bureaucrat and the legislature, if lobbying either the bureaucrat or the legislature results in a policy that makes the group at least as well off as the status quo policy, then the group should lobby the one whose policy gives it the highest utility.

The following conditions summarize the conditions for lobbying and venue choice by the group in any perfect Bayesian equilibrium. We denote the equilibrium strategy

of player $i \in \{L, B, G\}$ by σ_i^* and the equilibrium probability of monitoring by the legislature by p_L^* . The group's behavior in any PBE is given by the following:

- $u_G(y, s) \geq \max[p_L^* u_G(x_L^*(s), s) + (1 - p_L^*) u_G(\tilde{x}_L^*(\mu), s), u_G(x_B^*(s), s)]$
Group does not lobby,
- $p_L^* u_G(x_L^*(s), s) + (1 - p_L^*) u_G(\tilde{x}_L^*(\mu), s) \geq \max[u_G(y, s), u_G(x_B^*(s), s)]$
Group lobbies legislature,
- $u_G(x_B^*(s), s) \geq \max[u_G(y, s), p_L^* u_G(x_L^*(s), s) + (1 - p_L^*) u_G(\tilde{x}_L^*(\mu), s)]$
Group lobbies bureaucrat.

It follows immediately that, in any PBE, the legislature chooses $p_L^* \in (0, 1)$ only if

$$\int_s u_L(x_L^*(s), s) \mu(s) ds - c \leq \int_s (u_L(\tilde{x}, s) \mu(s) ds \quad (1)$$

Equation 1 implicitly defines two regions of strict preference – one in which the legislature realizes that incurring the cost of discerning the true state is not offset by the gains from being able to impose its most preferred policy with probability 1 and another in which the legislature realizes that the gains from being informed outweigh the costs of becoming informed. In substantive terms, we should expect hearings to be held when the expected benefits from choosing the optimal policy outweigh the costs of holding hearings. Conversely, equilibria in cases in which the legislature's preferences are weak compared to the cost of holding hearings are characterized by the legislature setting policy without holding hearings when lobbied. We discuss each of these cases below in more detail.

The immediate question, then, is which states of nature result in the legislature being lobbied by the interest group. Given that an informed legislature chooses its most preferred policy in equilibrium and an uninformed legislature cannot condition its choice on the true state, the answer to this question depends on whether the legislature incurs the cost to gather information about the true state s . We now briefly discuss two types of equilibria, first examining equilibria in which the legislature always holds hearings when lobbied (i.e., $p_L^* = 1$); and second, examining equilibria in which hearings are never held ($p_L^* = 0$). We refer to these as “perfect monitoring” and “no monitoring” equilibria, respectively.¹³

Perfect Monitoring

If the legislature always learns the true state, then the group activates the legislature only when the group prefers the legislature's conditional ideal point to both the conditional ideal point of the bureaucrat and the prevailing status quo policy. We refer to

¹³ The two types do not exhaust the set of possible perfect Bayesian equilibria. In particular, even if the group is restricted to playing a state-conditioned pure strategy, there may exist PBE in which the legislature randomizes when deciding whether to hold hearings or not (i.e., PBE in which $p_L^* \in (0, 1)$). Generally, however, such equilibria are not robust to perturbations of the players' preferences. Accordingly, and for reasons of space, we do not consider these equilibria in this paper.

equilibria in which the legislature always learns the true state as perfect monitoring PBE (PM-PBE). The following proposition summarizes the behavior of the lobbyist in such equilibria.

Proposition 1 *Consider a perfect Bayesian equilibrium, (σ^*, p_L^*) , with $p_L^* = 1$ and supporting posterior beliefs μ . The lobbyist's strategy, σ_G^* , satisfies the following condition:*

$$\sigma_G^{L,*}(s) > 0 \Rightarrow \begin{cases} u_G(x_L^*(s), s) \geq u_G(y, s) \text{ and} \\ u_G(x_L^*(s), s) \geq u_G(x_B^*(s), s) \end{cases},$$

and the following condition is satisfied:

$$\int_S u_L(x_L^*(s), s) \mu(s) ds - c \geq \int_S u_L(\tilde{x}_L^*(\mu), s) \mu(s) ds.$$

In short, perfect monitoring occurs only if the group's choice to lobby the legislature indicates that the state of nature is such that the legislature's potential gains from informed policy-making exceed the cost of acquiring information. The potential gains from acquiring information are measured relative to the legislature's optimal policy choice conditional only on the fact that the group lobbied the legislature. Substantively, this implies that the legislature has an incentive to hold hearings whenever the set of groups that lobby the legislature do not allow the legislature to pin down the true state and when lobbyists' desires to change the status quo coincide strongly enough with the legislature's desires to change it as well. In other words, although the status quo is generally suboptimal (at least in ex post terms) from the legislature's perspective, neglecting the information gathering cost c , lobbying results in monitoring only when lobbying indicates that the expected payoff gain from changing the status quo to the legislature's conditional ideal point exceeds the costs of holding hearings. Simultaneously, in a PM-PBE, the types of groups that support the rational procurement of information by the legislature in a PM-PBE must each prefer the legislature's conditional ideal policy to both the status quo and the conditional ideal policy of the bureaucrat.

Perfect monitoring by the legislature in equilibrium requires that the group's choice to activate the legislature indicates that the legislature's expected benefit from implementing its conditional ideal policy exceeds the cost of acquiring information, c . The possibility of venue choice by the group may be necessary for the existence of a PM-PBE, implying that, once the possibility of sorting by interest groups across venues is accounted for, legislative and bureaucratic expertise (in the form of informed policy-making) may indeed be *strategic* complements. Intuitively, this occurs because the group can lobby the agency in those states of nature in which the legislature's net benefit from informed policy-making does not exceed the cost of becoming informed. Finally, in a PM-PBE, the legislature is lobbied *only* if the group and the legislature both prefer some alternative policy to the status quo, given the true state. Thus, the model implies that, conditional upon the legislature holding hearings, the group benefits from the policy chosen by the legislature. In some ways this is not surprising: why else would the group have lobbied the legislature? The implication, however, is important to keep in mind

when using Congressional hearings and policy decisions as an indicator for whether an interest group influences policy in opposition to the members' (electorally induced) preferences.¹⁴

No Monitoring

Above we consider equilibria in which the legislature finds out the true state s with positive probability. In such equilibria, there is generally a degree of concordance between the preferences of the legislature and any group that chooses to lobby it. This happens because, in equilibrium, the group recognizes that the legislature imposes its own conditional ideal policy if it learns the true state. What if the legislature's equilibrium strategy is never to pay c to learn the true state s , so that $p_L^* = 0$? We now consider this type of PBE, which we refer to as no monitoring PBE (NM-PBE).

In a NM-PBE, the legislature's strategy is a distribution over X that does not depend upon the state of nature. Intuitively, such a strategy can be part of an equilibrium only when, conditional upon being lobbied, the legislature does not gain enough from informed policy-making to warrant incurring the cost of hearings, c . Note that this does not imply that the legislature does not care about policy – rather, this occurs when the fact that the group lobbied the legislature provides enough information for the legislature to choose a policy.¹⁵

VENUE CHOICE AND OPTIMAL DELEGATION

The results above demonstrate the importance of the bureaucrat's policy preferences in the group's venue choice decision. Furthermore, this decision itself is crucially important to the legislature in our model, because it determines when the group's information about the desirability of the status quo y given the state s can be acted on. This suggests that venue choice and activational lobbying can have important implications for legislative preferences over delegation to and policy preferences of bureaucrats. We explore these implications in this section and the next one.

Suppose that the legislature is in the (second) best of all possible worlds – although it delegates authority to make policy, it can completely specify the bureaucrat's conditional ideal policies as a function of the state s . The only constraints facing the legislature are the status quo policy y and the group's ability not to participate with either the legislature or the bureaucrat (i.e., the structure of the game that follows delegation of authority).

¹⁴ This point is similar to that made by Krehbiel (1999) with regard to the search for an independent influence of partisan affiliation on Congressional decision-making.

¹⁵ As alluded to in footnote 13, a third class of PBE also exists, in which the legislature is indifferent between learning and not learning the true state. In previous versions of this paper, we referred to this type of equilibrium as an occasional monitoring PBE (OM-PBE). These occur only under (obvious) knife edge conditions, and it sheds essentially no light on them to state them in symbols. Though they play a minor role in the second section, we do not focus on them.

The legislature's strategy space in this agency design problem is the space of functions from S into X , $\mathcal{F}(S, X)$, where a typical element is denoted by $x_B : S \rightarrow X$, which represent all of the possible choices of conditional ideal points for the agency. Given the restriction to perfect Bayesian equilibria and the bureaucrat's assumed informational structure, the legislature does not need to consider the complete state-specific structure of the agency's payoffs – all that is relevant is the agency's best response, which is equal to its conditional ideal point. We presume that the legislature's payoff from a choice $x_B \in \mathcal{F}(S, X)$ is its ex ante expected payoff from the legislature's most preferred PBE.¹⁶

We denote the set of equilibrium strategy-belief profiles, given a choice of the agency's conditional ideal point $x_B \in \mathcal{F}(S, X)$ and the status quo policy y , by $\Phi^*(x_B, y)$. The ex ante expected payoff of the legislature from a strategy-belief profile ϕ , given status quo policy y , is written as $V_L(\phi, y)$.

With this notation and the equilibrium selection process defined, the legislature's agency design problem, which we refer to as the "lobbying constrained delegation problem" (LCDP), is written formally as follows:¹⁷

$$\max_{x_B \in \mathcal{F}(S, X)} \left[\max_{\phi \in \Phi^*(x_B, y)} [V_L(\phi, y)] \right]. \quad (2)$$

A key building block in addressing this problem is the legislature's preferences concerning the different types of equilibria defined and discussed earlier in the paper. In particular, in the optimal delegation setting, so long as a fairly mild restriction on the preferences of the legislature and the group (relative to the cost of hearings, c) is satisfied, a PM-PBE exists that the legislature weakly prefers to any NM- or OM-PBE.¹⁸ The condition on preferences and c basically states that the legislature can form a potentially rational belief that would justify information acquisition in the event that the legislature is activated by the group. Before proving this result, however, we explore the issue of existence of the different types of PBE.

Our first result proves that the following condition on the legislature's preferences must be satisfied in order for a PM-PBE to exist.

¹⁶ The question of what equilibrium to select is a complicated one with no clear answer. We presume that the legislature has the power to select its most preferred PBE because the focus in this section is on the constraints imposed on, and opportunities afforded to, the legislature by the possibility of venue choice by the interest group. To focus on other PBE (e.g., the equilibrium most preferred by the group) would strengthen the findings of this section regarding the occasions in which the ally principle fails to hold in the venue choice model of delegation.

¹⁷ Note that the status quo policy y operates as an exogenous parameter of the LCDP as defined in Equation 2. This is in keeping with the interpretation that it represents the outcome of an unmodeled political process when the group does not participate.

¹⁸ OM-PBE, or occasional monitoring PBE, defined in footnote 15, are perfect Bayesian equilibria in which the legislature holds hearings with some positive probability, but not with certainty (i.e., the legislature uses a mixed strategy in making its hearings decision). Thus, this statement implies that the PM-PBE that is *most* preferred by the legislature is weakly preferred to all other PBE strategy-belief profiles. However, it is not necessarily true that the legislature weakly prefers *all* PM-PBE to any NM-PBE or OM-PBE.

Assumption 1 (IS- c) *The legislature's preferences satisfy informational sensitivity at c (IS- c) if there exists a $\mu \in \mathcal{P}(S)$ such that*

$$\int_X u_L(x_L^*(s), s) d\mu(s) - c \geq \max_{x \in X} \int_X u_L(x, s) d\mu(s). \quad (3)$$

Restricting attention to PBE eliminates two types of behavior in this game:

1. noncredible threats by either the bureaucrat or an informed legislature, and
2. incorrect beliefs being held by the legislature given that the legislature is lobbied with positive probability on the equilibrium path of play.

The “given” part of the second item is key to the proof of the following proposition, which demonstrates that satisfaction of IS- c is a necessary condition for the existence of a PM-PBE (or an OM-PBE). The proofs of all results are in the appendix.

Proposition 2 *Suppose that IS- c does not hold. If ϕ^* is a PBE strategy-belief profile, then ϕ^* is a NM-PBE (i.e., $p_L^* = 0$ under ϕ^*).*

IS- c is a necessary condition for the existence of a PM-PBE. Moreover, the model is not very interesting without this restriction being satisfied – without satisfaction of IS- c , the legislature *never* wants to hold hearings, regardless of any of the other features of the model.

Although IS- c is necessary for the existence of a PM-PBE, it is not sufficient. This is because it is possible that any μ that satisfies Inequality 3 would lead to positive probability lobbying of the legislature by the group in such a way that is not consistent with μ . Therefore, in order to obtain a sufficient condition to sustain a PM-PBE in which the legislature is never actually activated by the group, we need to consider the relationship between the group's and the legislature's preferences.

The legislature's problem under the LCDP is to choose an optimal commitment mechanism subject to the voluntary participation of the group – a participation constraint that depends on the status quo policy, y . Defining the set of policies that are Pareto-superior to the status quo y from the legislature's and interest group's perspectives *or* offer both the same payoff as the status quo, given a state of nature s as

$$P_{LG}(s, y) = \frac{(\{x \in X : u_G(x, s) > u_G(y, s)\} \cap \{x \in X : u_L(x, s) \geq u_L(y, s)\}) \cup (\{x \in X : u_G(x, s) \geq u_G(y, s)\} \cap \{x \in X : u_L(x, s) > u_L(y, s)\})}{\{x \in X : u_G(x, s) \geq u_G(y, s)\} \cup \{x \in X : u_L(x, s) > u_L(y, s)\}},$$

we have implicitly defined a correspondence, denoted by P_{LG} , from $S \times X$ into X . Using this correspondence, we now further define the following set of states of nature in which no policy Pareto dominates the status quo policy, y , from the legislature's and interest group's perspectives:

$$D(y) = \{s \in S : P_{LG}(s, y) = \emptyset\}.$$

Intuitively, this is the “disagreement set” for the legislature and interest group: the states of nature in which the group does not want the legislature to make policy. The next restriction on preferences requires that there exist a nonempty set of beliefs that satisfy the requirement for IS- c (Inequality 3) and assign positive probability only to states of nature in which the group would strictly prefer the status quo to an informed policy decision by the legislature.

Assumption 2 (PD- c , y) *The legislature’s and group’s preferences satisfy potential disagreement at c and y [PD- c , y] if there exists a $\mu \in \mathcal{P}(S)$ such that μ satisfies*

1. *Inequality 3 and*
2. *$s \notin D(y)$ implies that $\mu(s) = 0$.*

Let $\Delta(y) \subset \mathcal{P}(S)$ denote the set of belief functions that satisfy items 1 and 2 of Assumption 2. This set is used to construct the solution to the LCDP when PD- c , y is satisfied. The next proposition states the solution and the PM-PBE implemented by it. We then prove that this solution is an optimal one in Theorem 2 after proving a preliminary theorem (Theorem 1).

Proposition 3 *Suppose that PD- c , y is satisfied and consider the following choice of conditional ideal point for the agency, $x_B^* \in \mathcal{F}(S, X)$.¹⁹*

1. $x_B^*(s) = x_L^*(s)$ for all $s \in S$ such that $x_L^*(s) \in P_{LG}(s, y)$,
2. $x_B^*(s) \in \arg \max_{x \in P_{LG}(s, y)} u_L(x, s)$ for all $s \notin D(y)$,
3. $x_B^*(s) = x_L^*(s)$ for all $s \in D(y)$.

This choice of x_B^ supports the following PM-PBE strategy-belief profile:*

$$\mu \in \Delta(y) \tag{4}$$

$$\sigma_L^*(s) = x_L^*(s) \text{ for all } s \in S \tag{5}$$

$$\sigma_L^*(\emptyset) = \arg \max_{x \in S} \int_{D(y)} u_L(x, s) \mu(s) ds \tag{6}$$

$$\sigma_B^*(s) = x_B^*(s) \text{ for all } s \in S \tag{7}$$

$$\sigma_G^*(s) = \begin{cases} (0, 1, 0) & \text{for all } s \notin D(y) \text{ and} \\ (0, 0, 1) & \text{for all } s \in D(y) \end{cases} \tag{8}$$

$$p_L^* = 1. \tag{9}$$

Before showing that the choice of agency conditional ideal point described in Proposition 3 is an optimal choice by the legislature, we provide a preliminary theorem concerning the legislature’s preferences over the different types of equilibria. In particular, the following theorem demonstrates that satisfaction of PD- c , y is sufficient

¹⁹ Note that the first case is actually implied by the second case. The separation of the two is made for the purposes of exposition later in the paper.

to ensure that the LCDP can be solved by the legislature through the implementation of a PM-PBE. Put another way, when PD- c , y is satisfied, there exists an implementable PM-PBE that the legislature weakly prefers to all other implementable PBE. As mentioned earlier, this fact is central to the analysis in this and the next section of the paper.

Theorem 1 *Suppose that PD- c , y is satisfied, ϕ is an OM-PBE in $\Phi^*(x_B, y)$ and ϕ^* is the PM-PBE in $\Phi^*(x_B^*, y)$ as described in Proposition 3. Then,*

$$V_L(\phi, y) \leq V_L(\phi^*, y).$$

The following theorem states that the agency preferences as described in Proposition 3 solve the LCDP whenever PD- c , y is satisfied.

Theorem 2 *Suppose that PD- c , y is satisfied. Then the agency preferences as described in Proposition 3 constitute a solution to the LCDP (i.e., $x_B^* \in \mathcal{F}(S, X)$ as described in Proposition 3 satisfies Equation 2).²⁰*

1. $x_B^*(s) = x_L^*(s)$ for all $s \in S$ such that $x_L^*(s) \in P_{LG}(s, y)$,
2. $x_B^*(s) \in \arg \max_{x \in P_{LG}(s, y)} u_L(x, s)$ for all $s \notin D(y)$,
3. $x_B^*(s) = x_L^*(s)$ for all $s \in D(y)$.

Theorem 2 implies that, so long as PD- c , y is satisfied (which requires that c not be too large), the solution to the legislature's problem is invariant to the cost of hearings, c . It is not necessary that $c > 0$. This is because, if $c \leq 0$, there also exists a PM-PBE following from the choice of $x_B^*(s)$ described in Theorem 2 in which the group activates the legislature only when $x_L^*(s) \in P_{LG}(s, y)$, activates the agency when $s \notin D(y)$ and $x_L^*(s) \notin P_{LG}(s, y)$ and activates in neither venue when $s \in D(y)$. Therefore, the only role of c in Theorem 2 is implicit: in essence, c determines the equilibrium that the legislature prefers to implement, but not the preferences of the optimal agency. The legislature's optimal choice of agency preferences in the venue choice framework does not depend on the costliness of legislative information gathering because the optimal design of delegation induces no legislative lobbying in equilibrium.

Those states of nature that fall into the second case of the optimal solution but not the first are exactly the states of nature in which the ally principle fails to hold. In those states of nature, the legislature's optimal agency chooses a policy different from what would be chosen by an informed legislature. The reason the ally principle fails in the LCDP is the constraint of procuring information from the interest group. The legislature recognizes that it would sometimes rather have the group participate in the policy process, and get

²⁰ The agency preferences described in Proposition 3 constitute a solution to the LCDP because, generally speaking, there are multiple solutions to the LCDP. This multiplicity is more in appearance than in reality, however, as all solutions to the LCDP differ only with respect to the bureaucrat's conditional ideal point in states of nature in which there exists no policy unanimously preferred to the status quo by both the legislature and the group (i.e. for $s \in D(y)$.)

a suboptimal policy conditional on the state that is revealed, than not have it participate or have that state revealed at all.²¹

The rationale for agency design here is somewhat different from that in the seminal work on administrative structure of McCubbins, Noll, and Weingast (1987). Our framework, like theirs, puts Congress squarely in charge of the agency structure and design process. Our results, like theirs, imply that Congress wishes to push agency ideal points in the direction of interest groups' ideal points. However, in our model, this is not a way for Congress to have the agency also implement Congress's ideal policies, or those of the enacting coalition. Implicit in our framework is the assumption that the group cannot, through its lobbying efforts, contributions, etc., make its own preferences those of the enacting coalition as well. Congress in turn recognizes this and the (negative) effect it has on the group's participation. In the solution to the LCDP, Congress induces participation of a group with which it disagrees ideologically through a choice of agency that is more sympathetic to the group's point of view than the legislature would be on its own. Far from being a sign that the group has captured the agency or "bought" policy, this apparent capitulation by the agency is by Congressional design and, furthermore, occurs when (and because) the group and Congress have different preferences. Moreover, provisions for public participation in agency proceedings are not only a device to make those agencies more "democratic" or more faithful to the preferences of an enacting coalition in Congress. Our model highlights their role in eliciting more information to be used in the policy process as a whole.

VENUE CHOICE, THE ALLY PRINCIPLE, AND ADDITIVE POLICY SHOCKS

The analysis in the previous section places relatively few restrictions on the policy or state space, or how shocks and policies combine to create outcomes. Therefore a natural question is whether the necessary conditions for the key results implicitly rule out specific assumptions about dimensionality or functional forms – and in particular, ones that are usually made in applied theoretical models of delegation. One such restriction is the additive policy shocks condition. This restriction forces the legislature to impose an ordering on the conditional ideal points of the legislature, the agency, and the interest group for *all* states of nature s .²² It is employed and plays a key role in many existing models of delegation and policy-making, including Epstein and O'Halloran (1999), Krehbiel (1991), and Bendor and Meirowitz (2004). Indeed, it is a standard assumption

²¹ This result provides a clear view of the value to the legislature of staying out of the agency's business, on occasion, and of weakening its powers of ex post review so that the agency can act on its own distinct preferences. Although the addition of ex post legislative review to the theory is clearly desirable, it lies beyond the scope the current paper. The issue is addressed in detail in Patty (2005), where it is shown that the legislature generally does not gain from the possibility of ex post review within the optimal delegation framework examined here.

²² This ordering can be taken with respect to a metric on the policy space or, more generally, with respect to policy utility from each player's conditional ideal point.

in the existing theoretical work on delegation. Therefore, it is of obvious interest to see what it implies for the LCDP examined in the previous section. First, however, we provide a formal definition of the restriction.

Assumption 3 (APSC- κ) *Player i 's (with $i \in \{L, B, G\}$) preferences satisfy the additive policy shocks condition with respect to κ (APSC- κ) if there exists some $\kappa \in \mathbf{R}$ such that, for all $x \in X$, and $s, t \in S$,*

$$u_i(x, s) = u_i(x + \kappa(t - s), t). \quad (10)$$

Assumption APSC- κ is satisfied for a player i in any model in which the policy space is \mathbf{R} , the set of states of nature is a convex subset of \mathbf{R} , the policy outcome, $z \in \mathbf{R}$, is determined by $z = x + \kappa s$ (with $\kappa \in \mathbf{R}$, as above), and the player i 's policy payoffs are measurable with respect to the policy outcome, z .²³

Lemma 1 *Suppose that*

1. *for some $\kappa \in \mathbf{R}$, all players' preferences (i.e., all $i \in \{L, B, G\}$) satisfy APSC- κ , and*
2. *for some $s \in S$,*

$$u_G(x_B^*(s), s) \neq u_G(x_L^*(s), s). \quad (11)$$

Then, in any PM-PBE strategy-belief profile, ϕ , of the resulting game,

$$\sigma_G^{L,*}(s) > 0 \text{ for any } s \in S \text{ implies } \sigma_G^{B,*}(s) = 0 \text{ for all } s \in S.$$

In other words, Lemma 1 states that, if all players' preferences satisfy the additive policy shocks condition and the legislature always holds hearings when lobbied, then in equilibrium, only one venue is ever used by the group. In particular, satisfaction of APSC- κ for all players' preferences (for a fixed κ) ensures that the group's most preferred venue is invariant to the state of nature. Because each venue is perfectly informed before setting policy by definition in a PM-PBE, and APSC- κ in a single dimensional policy space ensures that the players' ideal policies change in the same way as the state changes, a preference for a venue in one state implies a preference for that venue in all states.

We now consider a standard delegation framework (one that is utilized in the models of delegation mentioned above). The policy space is $X = \mathbf{R}$, the set of states of nature is $S = \mathbf{R}$, and players' utilities are of the form

$$u_i(x, s) = h(|x - s - x_i^*|), \quad (12)$$

where h is a continuously differentiable²⁴ and strictly decreasing function. Such preferences satisfy APSC- κ with $\kappa = -1$. In this world, the legislature's constrained LCDP

²³ Actually, Equation 10 is stronger than we need: if X is bounded, then Equation 10 fails to hold for some $x \in X$. Although it is possible to deal with this complication formally, the additional technical details offer nothing substantively interesting and are therefore omitted.

²⁴ As pointed out in Theorem 3, we only need differentiability of $h(z)$ at all $z > 0$.

is the problem of having to choose $x_B^* \in \mathbf{R}$. In terms of the standard models in this area, this is equivalent to choosing an ideal policy outcome for the agency when the policy outcome z is determined by the additive function $z(x, s) = x - s$.

Figure 2 illustrates the four possible cases in this setting. The horizontal line depicts the outcome and state space, with ideal outcomes on the hash marks. The shaded regions in each case describe the group's equilibrium venue choice as a function of the state (in a PM-PBE), given the configuration of ideal points. In each case, for an intermediate range of states, the group chooses neither venue; it chooses a single venue for all extreme states. Note that in Cases 1, 2, and 4, the agency's ideal policy is outside the interval connecting the group's and the legislature's; in case 3 it is inside that interval.

The key result of this section is that the legislature's solution to the LCDP is similar to that pictured in Case 3: the legislature chooses an agency with an ideal point somewhere between the ideal points of the legislature and the group: the legislature's optimal choice for x_B^* is some point in $[\min[x_L^*, x_G^*], \max[x_L^*, x_G^*]]$. This is established in the following theorem.

Theorem 3 *Suppose that there exists a function $h : \mathbf{R}_+ \rightarrow \mathbf{R}$ that is strictly decreasing and continuously differentiable everywhere except possibly at zero, such that the preferences for all players $i \in \{L, B, G\}$ are consistent with Equation 12 and PD-c, y is satisfied. Then, supposing without loss of generality that $x_L^* \leq x_G^*$, the legislature's optimal choice of ideal point for the agency, x_B^* , lies within the interval $[x_L^*, x_G^*]$.*

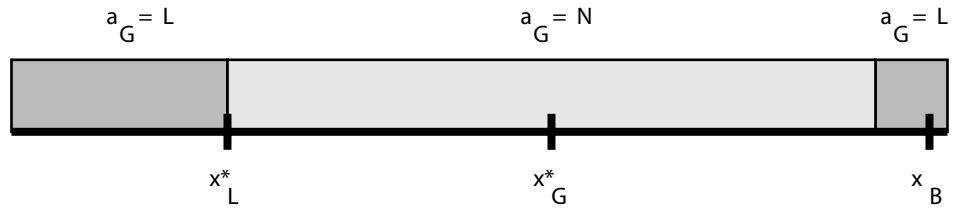
In a one-dimensional, additive policy shock, venue choice setting, the ally principle is violated as a result of the group's endogenous participation. In particular, the legislature has an incentive to choose an agency whose ideal point elicits information from (or activation by) the interest group as "cheaply" as possible.

Theorem 3 requires that PD-c, y be satisfied. Otherwise one would have to consider OM-PBE and NM-PBE. How restrictive is this requirement? Proposition 4 partially answers this question by providing sufficient conditions for the satisfaction of PD-c, y .

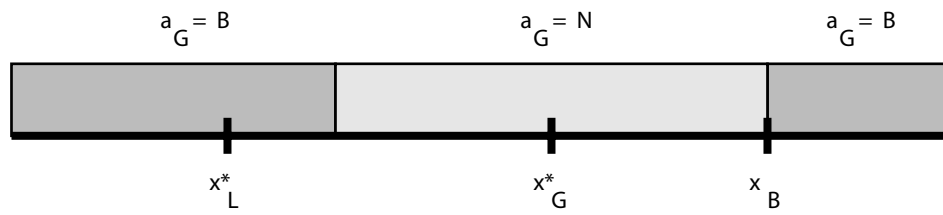
Proposition 4 *Suppose that there exists a function $h : \mathbf{R}_+ \rightarrow \mathbf{R}$ that is strictly decreasing function that is continuously differentiable everywhere except possibly at zero, such that the preferences for all players $i \in \{L, B, G\}$ are consistent with Equation 12 and that $x_L^* < x_G^*$. Then satisfaction of the following conditions ensures that PD-c, y holds:*

1. $D(y) = \{s \in S : y - s \in [x_L^*, x_G^*]\}$,
2. (a) *Strict concavity of h ,*
 (b) $f(y - x_L^*) > 0$,
 (c) $f(y - x_G^*) > 0$, and
 (d) *h is sensitive enough to policy, relative to c . Formally,*

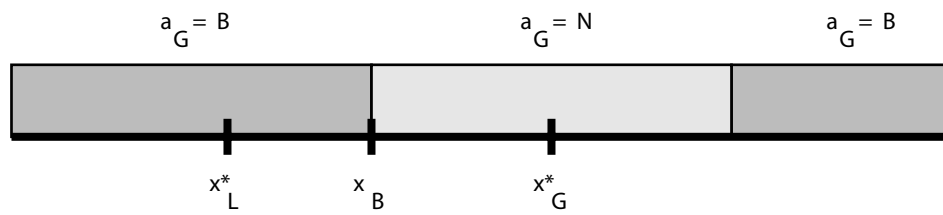
$$h(0) - h\left(\frac{x_G^* - x_L^*}{2}\right) \geq c. \quad (13)$$



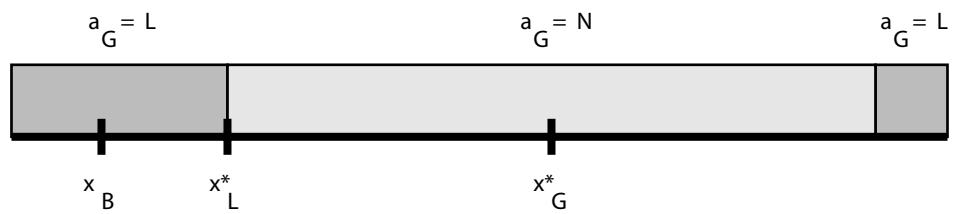
Case 1: Extreme pro-group agency



Case 2: Moderate pro-group agency



Case 3: Compromise agency



Case 4: Pro-legislature agency

Figure 2. The one-dimensional venue choice model

The first three conditions for Item 2 of Proposition 4 are very mild. The strict concavity of h is satisfied in nearly all applied models of delegation (Bendor and Meirowitz (2004) is a notable exception to this), and the assumption that the support of f includes $y - x_L^*$ and $y - x_G^*$ is standard – in words, it says that there is a feasible state of nature in which the status quo is the legislature’s conditional ideal point and a feasible state of nature in which the status quo is the group’s conditional ideal point. Accordingly, Equation 13 is the “most binding” of the conditions for Item 2 of Proposition 4 (at least relative to the existing theoretical literature). It is illustrative as well, implying that PD- c , y is satisfied (and, hence, Theorem 3 applies) when

- D. policy divergence between the group and the legislature ($|x_L^* - x_G^*|$) is large enough (assuming that the support of f continues to satisfy the second and third conditions of Item 2),
- H. h is sensitive enough to its argument (i.e., the legislature has strong preferences concerning policy outcomes), and
- C. c is small enough.

Recall that satisfaction of PD- c , y implies that the legislature’s optimal choice of agency preferences controverts the ally principle in a nontrivial set of states of nature. The comparative static implied by **D** is therefore somewhat familiar: as the divergence in policy preference between the legislature and interest group grows, the legislature is more likely to be forced to surrender some policy rents (in terms of designing preference divergence between itself and its appointed agent) in order to elicit information provision/policy activation by the interest group. The second comparative static, **H**, is analogous. The final comparative static, implied by **C**, is less intuitive. It is true because, for sufficiently high values of c , the legislature is unable to implement a PM-PBE with any choice of agency preferences.

THE FEDERAL TRADE COMMISSION

In this section we present a brief analysis of the Federal Trade Commission, particularly its revitalization and eventual reform in the 1970s and 1980s.²⁵ The purpose of this section is to relate the experiences of the Commission, Congress, and public interest groups to our model and attempt to show how the model presented here aids in our understanding of the development of relations between Congress and the bureaucracy. To summarize, after a long period of comparative latency, the FTC’s policy-making authority was expanded while its “ideological distance” from Congress increased. These two events, at odds under the ally principle, are reconciled in our model provided that sufficient scope for lobbying the bureaucracy exists. Following the first two developments, this is exactly what Congress took steps to ensure.

²⁵ Much more depth can be found in the excellent discussions of the FTC in Chapter 5 of Harris and Milkis (1989) and throughout Fritschler and Hoefler (1995).

Congress created the Federal Trade Commission as an independent regulatory commission in 1914 in an attempt to enforce antitrust law through the regulation of incipient monopolies. Largely confined to case-by-case policy-making through the 1960s, it was the Commission's responsibility to police unfair and deceptive trade practices (including a charge to protect consumers' rights as well as those of competitors) with the passage of the Wheeler-Lea Act in 1938. The FTC inherited the power to regulate deceptive advertising as a compromise between consumer advocates (who wanted the Food and Drug Administration to hold the authority to regulate advertising) and industry interests (who did not want the FDA to hold the authority, but were generally not opposed to the idea of regulation otherwise). The FTC remained largely a case-by-case policy-making agency until the late 1960s. After the passage of the APA in 1946, the FTC promulgated policy mostly through adjudications against specific firms. In 1969, however, two reports (one written by a group of volunteers organized by Ralph Nader and the other commissioned by the American Bar Association (ABA)) leveled several criticisms at the FTC, the primary one being that the Commission was unable or unwilling to enforce its statutes. In addition, critics depicted the leadership of the Commission as the mediocre product of a patronage system benefitting southern congressmen (Harris and Milkis 1989, p. 164). Both reports called upon the FTC to fulfill the role that had been assigned to it, namely consumer protection.

Following the reports' publications, President Nixon endorsed the ABA's report's findings and called for a "reactivation and revitalization of the FTC" (*Public Papers of the Presidents*, 1969, 887, cited in Harris and Milkis 1989, p. 167). The actions that followed – for example, the firing by Casper Weinberger (then a chairman of the Commission) of 18 of the Commission's 31 attorneys – represented an attempt to create an agency with preferences that were known and distinct from the preferences then apparently holding sway in Congress. This is not a struggle between the executive and legislative branches, however: Congress *could* have blocked these moves but did not move to do so. In addition, Congress could have achieved the policy outcomes desired by the new appointees in the absence of the reorganization as well, though presumably only at significant cost in the form of hearings and debate. Finally, several Congressmen perceived electoral advantage to flow from being seen as a consumer's advocate, or at the very least felt that to be seen as opposing the American consumer carried substantial electoral risk.

Following the shuffle at the FTC, the Commission entered a period of decidedly activist policy-making. Initially, the Commission began more vigorous enforcement of its statutory mandate through adjudications. Eventually it began issuing industry-wide trade regulation rules, because they are far more effective than adjudications affecting one or a few firms in terms of implementing social and economic policy. Thus, the FTC effectively broadened its own discretionary powers between 1969 and 1977.

The FTC's expansion from case-by-case enforcement of its mandate to more sweeping regulatory rule-making was furthered because a "beat cop" image of the FTC was unsatisfactory not only to members of the consumer movement, but members of Congress as well. Some found case-by-case enforcement to be potentially arbitrary and capricious (a concern which could have been dealt with, in theory at least, under the Administrative Procedures Act) while others, more in line with the present discussion, seemed to

recognize that rule-making would result in systematic policy that could help define the role of the FTC with regard to both citizens' and firms' interests. For our purposes, describing adjudicatory policy-making as capricious and ineffective is equivalent to stating that the FTC's role in policy-making made it impossible to infer whether lobbying it would be effective. Indeed, the effectiveness of lobbying an agency whose policy-making is confined to individual and particular cases is presumably far lower than that of lobbying an agency that promulgates policy through regulatory rules. In effect, an adjudicatory agency does not effectively serve the informational purpose of the agency in our model – groups seeking adjudications rarely (if ever) approached Congress for redress prior to the revitalization, and groups seeking broader reforms would not find lobbying the FTC effective until the Commission undertook rule-making as a means of making policy.

The turning point in the FTC's adoption of rule-making occurred in 1971, when the Commission issued a rule requiring that accurate octane levels be posted on gasoline pumps. Producers challenged the Commission's authority to issue such an industry-wide rule in court, with the FTC eventually winning judicial endorsement of its rule-making authority in *National Petroleum Refiners Association v. FTC*.²⁶ This authority was soon endorsed by Congress with the passage of the Magnusson–Moss Act of 1975. The Act not only solidified the FTC's policy-making powers with regard to consumer protection and antitrust matters, it also imposed fairly explicit reporting and procedural requirements that the Commission has to satisfy when seeking to implement policy through rule-making. For example, the Commission is required, above and beyond the “notice and comment” requirements of informal rule-making in the Administrative Procedure Act of 1946, to publicize and provide specific reasons for proposed rules, and allow interested parties to file written reports (including data, opinions, and statements of support or opposition) with the Commission. Additionally, all material submitted to the FTC regarding proposed rules was required to be made public (Ellis 1981, p. 162, cited in Harris and Milkis 1989, p. 173). In general, the opportunity for public participation at the FTC was expanded greatly, above what had previously been the case as well as above what was required of many other agencies whose public participation requirements were limited to those stated in the APA.

In terms of our model, this expansion of lobbying channels in the bureaucracy is a corollary of the expansion of FTC activism in the first place. The creation by Congress of another policy-making venue with distinct preferences and essentially independent ability to initiate policy makes no sense unless that venue can be lobbied.²⁷ When that

²⁶ *National Petroleum Refiners Association v. FTC*, 482 F 2d 672, D.C. Circuit, 1973.

²⁷ Moreover, these changes are difficult to explain with an alternative story drawn from interest group politics, whereby the rising power of consumer groups caused Congress to institute favorable design changes, for several reasons. First, the changes did not induce the FTC simply to choose a different general location in a policy space. In terms of policy *content*, the changes at the FTC were largely neutral. A shift to comprehensive policy declarations is not necessarily either pro-consumer interests or pro-industry; indeed, the FTC has used its powers to the benefit of each interest in various periods since the 1970s. The changes in the FTC did not cement a particular ideology into FTC decision-making (cf. Weingast and Moran 1983). In addition, if the design changes resulted from Congress sharing the preferences or responding to the concerns of a strong interest group

venue is approached by lobbyists, it responds (given legal constraints and administrative structures (McCubbins, Noll, and Weingast (1987, 1989), as well as less formal pressures from repeated interaction). And when it is bypassed by lobbyists, an inference can be made about the urgency of the issue at hand or the appropriate policy response. With the passage of Magnusson–Moss, Congress not only explicitly endorsed the FTC’s authority to service interested parties but also enhanced the signal relayed by such groups’ participation in the FTC’s rule-making process. In return for effectively granting legislative authority to the FTC, Congress extracted an informational gain that could (and would) be used to its advantage when approached regarding consumer protection and antitrust issues in the future.

SUMMARY

In this paper, we have analyzed the interaction of multiple institutional actors with policy-relevant information (or the potential to acquire it). Our argument is that when these institutions all interact with one another, there are important implications for the informational roles they play in the policy process – and therefore our interpretation of the form they take. For example, when venue choice by an informed lobbyist is possible because of diffuse policy-making authority, a legislature actually may have an incentive to delegate to an agent whose preferences do not reflect its own perfectly. The reasons are that (i) ideological differences between the legislature and agency can induce the participation, to the legislature’s advantage, of groups that would not lobby in either venue if the agency were the legislature’s ideological clone, and (ii) ideological differences can make legislative lobbying more informative, when it happens, because of the signal conveyed by a group’s decision to approach the legislature and not the agency.

In addition, supposing that the bureaucracy has lower costs of procuring information (or, more generally, lower costs of “doing things right”), the legislature can service many types of groups more efficiently because the bureaucracy exists. In particular, the legislature may not have very strong (or perhaps any) preference between different policies *most* of the time. Without the bureaucracy as a venue, groups lobbying the legislature in this case would get uninformed policy-making from the legislature. With the inclusion of the bureaucracy, the groups can partially distinguish themselves at no cost to the legislature. In these cases, the legislature holds hearings regarding important issues and the bureaucracy deals with less important ones. This feature emerges in equilibrium; it is not imposed by a restriction on the set of issues the bureaucracy can address (by assumption it is the same as that for the legislature). Even allowing for “capture” of the bureaucracy by some or all lobbyists that approach it, the increased ability of the legislature to deal with important, allied lobbyists can result in an indirect

coalition (a consumer interest, in this case), then at least at the time of the design changes themselves, the agency should roughly reflect the preferences of Congress (with departures over time due to bureaucratic drift or changes in congressional preferences). But as this account has emphasized, that was not necessarily the case with the FTC.

increase in the legislature's well-being. This dynamic is similar, in some respects, to a monopolist who offers differentiated products so that heterogeneous consumers can self-select and reduce the time the monopolist must spend fashioning specialized goods for low-demand consumers. Optimal delegation involves a bureaucracy that is efficiently serving the interests of interest groups that the legislature does not consider important enough relative to the costs of policy-making on those issues, in terms of time taken from other issues.

The model also raises the point that legislative delegation can be desirable, not only because the agency to whom authority is delegated may be more expert than the legislature itself, but also because voluntary sorting by lobbyists can increase the incentive for the legislature to acquire information and make better-informed policy choices when it is lobbied.

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PROOFS

Proposition 2 *Suppose that IS-c does not hold. If ϕ^* is a PBE strategy-belief profile, then ϕ^* is a NM-PBE (i.e., $p_L^* = 0$ under ϕ^*).*

Proof: By way of contradiction, suppose otherwise: there exists a PM-PBE strategy-belief profile, $\phi^* = (\sigma^*, p_L^*, \mu)$, such that $p_L^* > 0$. For ϕ^* to be a PBE, it must be the case that the legislature's expected payoff from gathering information and appropriately best responding, conditional upon being lobbied, meets or exceeds its maximum expected payoff from uninformed policy-making. Formally, this is written as

$$\begin{aligned} \int_S v_L(1, \sigma_L(s), \sigma_G, \sigma_B | a_G = L) \mu(s) ds &\geq v_L(\emptyset, \sigma_L(\emptyset), \sigma_G, \sigma_B | a_G = L) \\ \int_S \int_X u_L(z, s) \sigma_L(z, s) \mu(s) dz ds - c &\geq \int_S \int_X u_L(z, s) \mu(s) \sigma_L(z | \emptyset) dz ds \\ \int_S u_L(x_L^*(s), s) \mu(s) ds - c &\geq \max_{x \in X} \int_S u_L(x, s) \mu(s) ds \end{aligned} \quad (14)$$

However, by the supposition that IS-c does not hold, it must be the case that, for any $\mu \in \mathcal{P}$,

$$\int_X u_L(x_L^*(s), s) d\mu(s) - c < \max_{x \in X} \int_S u_L(x, s) d\mu(s).$$

which contradicts Inequality 14. Thus, any strategy-belief profile that is a PBE when IS-c is not satisfied must have $p_L^* = 0$, as was to be shown. ■

Proposition 3 *Suppose that PD-c, y is satisfied and consider the following choice of conditional ideal point for the agency, $x_B^* \in \mathcal{F}(S, X)$.²⁸*

1. $x_B^*(s) = x_L^*(s)$ for all $s \in S$ such that $x_L^*(s) \in P_{LG}(s, y)$,
2. $x_B^*(s) \in \arg \max_{x \in P_{LG}(s, y)} u_L(x, s)$ for all $s \notin D(y)$,
3. $x_B^*(s) = x_L^*(s)$ for all $s \in D(y)$.

This choice of x_B^ supports the following PM-PBE strategy-belief profile:*

$$\mu \in \Delta(y) \quad (15)$$

$$\sigma_L^*(s) = x_L^*(s) \text{ for all } s \in S \quad (16)$$

$$\sigma_L^*(\emptyset) = \arg \max_{x \in S} \int_{D(y)} u_L(x, s) \mu(s) ds \quad (17)$$

$$\sigma_B^*(s) = x_B^*(s) \text{ for all } s \in S \quad (18)$$

²⁸ Note that the first case is actually implied by the second case. The separation of the two is made for the purposes of exposition later in the paper.

$$\sigma_G^*(s) = \begin{cases} (0, 1, 0) & \text{for all } s \notin D(y) \text{ and} \\ (0, 0, 1) & \text{for all } s \in D(y) \end{cases} \quad (19)$$

$$p_L^* = 1. \quad (20)$$

Proof: The proof proceeds by considering the legislature's beliefs and strategies first, the group's strategy second, and then concludes with the agency's strategy.

Legislature. First, satisfaction of PD- c , y guarantees that a belief $\mu \in \Delta(y)$ can be chosen such that $p_L^* = 1$ is a best response by the legislature, conditional upon being lobbied by the group. Conditional upon holding hearings, the legislature's best response is clearly to choose its conditional ideal policy. Conditional upon not being lobbied, the legislature's behavior – by construction – constitutes a best response to its beliefs.

Group. To see that the group is best responding, consider an arbitrary state $s \in S$. If $s \in D(y)$, then the group must prefer not lobbying to lobbying the agency or the legislature because both implement $x_L^*(s)$ and, by the definition of $D(y)$, it must be the case that

$$u_G(x_L^*(s), s) < u_G(y, s).$$

If $s \notin D(y)$, then the group weakly prefers lobbying the agency to lobbying the legislature. This is because the legislature holds hearings conditional upon being lobbied ($p_L^* = 1$) and then chooses $x_L^*(s)$ as the policy outcome. By construction,

$$u_G(x_L^*(s), s) \leq u_G(x_B^*(s), s),$$

so that lobbying the agency can never result in a lower payoff for the group than lobbying the legislature. Thus, the group is best responding in all states of nature.

Agency. The agency's best response in all states of nature, conditional upon being lobbied, is to choose its conditional ideal point.

As all players are best responding at every information set, given the other players' strategies and the legislature's beliefs are (trivially) consistent with Bayes's rule, the strategy-belief profile under consideration constitutes a PM-PBE of the game following the choice of x_B^* described in the Proposition, as was to be shown. ■

Theorem 1 *Suppose that PD – c , y is satisfied, ϕ is an OM-PBE in $\Phi^*(x_B, y)$ and ϕ^* is the PM-PBE in $\Phi^*(x_B^*, y)$ as described in Proposition 3. Then,*

$$V_L(\phi, y) \leq V_L(\phi^*, y).$$

Proof: The legislature's difference in ex ante expected payoffs between an OM-PBE in which group types in S^L lobby the legislature and a PM-PBE as described in Proposition 3 is (supposing that group types in S^L all use a pure strategy and denoting the set of group types in S^L that lobby the agency in the PM-PBE by $S^{BL} = S^L \setminus D(y)$ and the set of group types in S^L that choose not to lobby in the PM-PBE by $S^{NL} = D(y) \cap S^L$):

$$\bar{Z}(c, y) = \left[\int_{S^{NL}} (p(u_L(x_L^*(s), s) - c) + (1 - p)u_L(\tilde{x}, s) - u_L(y, s))dF(s) + \int_{S^{BL}} (p(u_L(x_L^*(s), s) - c) + (1 - p)u_L(\tilde{x}, s) - u_L(x_B^*(s), s))dF(s) \right] \quad (21)$$

Equation 21 can be reexpressed as the following:

$$\bar{Z}(c, y) = \left[\begin{array}{l} p \int_{S^L} (u_L(x_L^*(s), s) - c - u_L(\tilde{x}, s)) dF(s) \\ + \int_{S^{NL}} (u_L(\tilde{x}, s) - u_L(y, s)) dF(s) \\ + \int_{S^{BL}} (u_L(\tilde{x}, s) - u_L(x_B^*(s), s)) dF(s) \end{array} \right] \quad (22)$$

Because we are considering an OM-PBE, Equation 22 reduces to

$$\bar{Z}(c, y) = \int_{S^{NL}} (u_L(\tilde{x}, s) - u_L(y, s)) dF(s) + \int_{S^{BL}} (u_L(\tilde{x}, s) - u_L(x_B^*(s), s)) dF(s). \quad (23)$$

Equation 23 implies the desired result. First, note that, under the solution described in Proposition 3, $s \in S^{NL}$ implies that $s \in D(y)$, implying that, if $u_L(\tilde{x}, s) \geq u_L(y, s)$, it must be the case that $u_G(\tilde{x}, s) < u_G(y, s)$. However, it is obviously true that $u_L(x_L^*(s), s) \geq u_L(y, s)$, implying that $u_G(x_L^*(s), s) < u_G(y, s)$. Therefore, if $s \in S^{NL}$, it must be the case that $u_G(\tilde{x}, s) > u_G(y, s)$, so that $u_L(\tilde{x}, s) < u_L(y, s)$ for all $s \in S^{NL}$. Accordingly, the first term of 23 is no greater than zero.

Considering the second term of Equation 23, $s \in S^{BL}$ implies that $u_G(x_B^*(s), s) \geq u_G(y, s)$. The construction of x_B^* in Proposition 3 implies that we can presume without loss of generality that $u_L(x_B^*(s), s) \geq u_L(y, s)$ for all $s \in S$.²⁹ Furthermore, $x_B^*(s) = \arg \max_{x \in P_{LG}(s, y)} u_L(x, s)$. If $x_L^*(s) \in P_{LG}(s, y)$, then it is clear that $u_L(\tilde{x}, s) \leq u_L(x_B^*(s), s) = u_L(x_L^*(s), s)$. If $x_L^*(s) \notin P_{LG}(s, y)$, then $u_L(\tilde{x}, s)$ must satisfy the following inequalities:

$$u_G(\tilde{x}, s) \geq u_G(y, s) \geq u_G(x_L^*(s), s)$$

Thus, because $u_G(\tilde{x}, s) \geq u_G(y, s)$ and $x_B^*(s) = \arg \max_{x \in P_{LG}(s, y)} u_L(x, s)$, it follows that $u_L(x_B^*(s), s) \geq u_L(\tilde{x}, s)$ for all $s \in S^{BL}$. Thus, the second term in Equation 23 is no greater than zero as well. Accordingly, the sum of the two terms in Equation 23 must be less than or equal to zero, implying the result. ■

Theorem 2 *Suppose that PD-c, y is satisfied. Then the agency preferences as described in Proposition 3 constitute a solution to the LCDP (i.e., $x_B^* \in \mathcal{F}(S, X)$ as described in Proposition 3 satisfies Equation 2).*³⁰

1. $x_B^*(s) = x_L^*(s)$ for all $s \in S$ such that $x_L^*(s) \in P_{LG}(s, y)$,
2. $x_B^*(s) \in \arg \max_{x \in P_{LG}(s, y)} u_L(x, s)$ for all $s \notin D(y)$,
3. $x_B^*(s) = x_L^*(s)$ for all $s \in D(y)$.

²⁹ Technically, this weak inequality need only hold for all $s \notin D(y)$, which is the case by construction for all $s \in S^{BL}$.

³⁰ The agency preferences described in Proposition 3 constitute a solution to the LCDP because, generally speaking, there are multiple solutions to the LCDP. This multiplicity is more in appearance than in reality, however, as all solutions to the LCDP differ only with respect to the bureaucrat's conditional ideal point in states of nature $s \in D(y)$.

Proof: Theorem 1 implies that consideration of a PM-PBE is without loss of generality so long as PD- c , y is satisfied.

Furthermore, the proof that the conditional ideal point function $x_B^* \in \mathcal{F}(S, X)$ described in Proposition 3 characterize an optimal solution by the legislature conditional upon x_B^* supporting a PM-PBE $\phi \in \Phi^*(x_B, y)$ in which the group never lobbies the legislature is straightforward and omitted.

The final question is whether the legislature can gain a higher ex ante expected payoff through implementing a PM-PBE in which the legislature is lobbied. The proof that such a PM-PBE yields a weakly lower ex ante expected payoff from the legislature is also straightforward and omitted. ■

Lemma 1 *Suppose that*

1. for some $\kappa \in \mathbf{R}$, all players' preferences (i.e., all $i \in \{L, B, G\}$) satisfy APSC- κ , and
2. for some $s \in S$,

$$u_G(x_B^*(s), s) \neq u_G(x_L^*(s), s). \quad (24)$$

Then, in any PM-PBE strategy-belief profile, ϕ , of the resulting game,

$$\sigma_G^{L,*}(s) > 0 \text{ for any } s \in S \text{ implies } \sigma_G^{B,*}(s) = 0 \text{ for all } s \in S.$$

Proof: Suppose, by way of contradiction, otherwise. Then there exists a PBE strategy-belief profile ϕ with $p_L^* = 1$ and two distinct states $s_L \in S$ and $s_B \in S$ such that, under ϕ ,

$$\begin{aligned} \sigma_G^{L,*}(s_L) &> 0 \text{ and} \\ \sigma_G^{B,*}(s_B) &> 0. \end{aligned}$$

By the presumption that ϕ is a PM-PBE, then, the following must be true:

$$\begin{aligned} u_G(x_L^*(s_L), s_L) &\geq u_G(x_B^*(s_L), s_L) \text{ and} \\ u_G(x_B^*(s_B), s_B) &\geq u_G(x_L^*(s_B), s_B). \end{aligned}$$

Noting that the satisfaction of APSC- κ by u_i (for $i \in \{L, B, G\}$) implies that

$$x_i^*(t) = x_i^*(s) + \kappa(t - s),$$

these inequalities can be rewritten as follows:

$$\begin{aligned} u_G(x_L^*(s_L), s_L) &\geq u_G(x_B^*(s_L), s_L) \text{ and} \\ u_G(x_B^*(s_L) + \kappa(s_B - s_L), s_B) &\geq u_G(x_L^*(s_L) + \kappa(s_B - s_L), s_B). \end{aligned}$$

However, APSC- κ for the group's preferences implies that

$$\begin{aligned} u_G(x_L^*(s_L), s_L) &= u_G(x_L^*(s_L) + \kappa(s_B - s_L), s_B) \text{ and} \\ u_G(x_B^*(s_L) + \kappa(s_B - s_L), s_B) &= u_G(x_B^*(s_L), s_L), \end{aligned}$$

so that

$$\begin{aligned} u_G(x_L^*(s_L), s_L) &= u_G(x_L^*(s_L) + \kappa(s_B - s_L), s_B) \\ &= u_G(x_B^*(s_L) + \kappa(s_B - s_L), s_B) \\ &= u_G(x_B^*(s_L), s_L). \end{aligned}$$

However, the condition expressed in (24) implies that

$$u_G(x_L^*(s_L), s_L) \neq u_G(x_B^*(s_L), s_L),$$

resulting in a contradiction. ■

Theorem 3 *Suppose that there exists a function $h : \mathbf{R}_+ \rightarrow \mathbf{R}$ that is strictly decreasing function that is continuously differentiable everywhere except possibly at zero, such that the preferences for all players $i \in \{L, B, G\}$ are consistent with Equation 12 and PD-c, y is satisfied. Then, supposing without loss of generality that $x_L^* \leq x_G^*$, the legislature's optimal choice of ideal point for the agency, x_B^* , lies within the interval $[x_L^*, x_G^*]$.*

Proof: Any choice $x_B > x_G^*$ is weakly dominated by $x_B' = x_G^*$ – the group lobbies the agency with a weakly higher probability in any equilibrium $\phi \in \Phi^*(x_B')$ than in any equilibrium $\phi \in \Phi^*(x_B)$. Also, the legislature's utility from policy-making by the agency is strictly higher in any equilibrium $\phi \in \Phi^*(x_B')$ than in any equilibrium $\phi \in \Phi^*(x_B)$.

The argument to show that any choice $x_B < x_L^*$ is dominated by $x_B = x_L^*$ is similar. In any PM-PBE, the group never lobbies the agency if $x_B < x_L^*$. Thus, considering a PM-PBE, the dominance of $x_B = x_L^*$ over any $x_B < x_L^*$ is clear. And, by the supposition that PD-c, y is satisfied, Theorem 1 implies that the presumption that the legislature's choice of x_B implements a PM-PBE is without loss of generality. ■

Proposition 4 *Suppose that there exists a function $h : \mathbf{R}_+ \rightarrow \mathbf{R}$ that is strictly decreasing function that is continuously differentiable everywhere except possibly at zero, such that the preferences for all players $i \in \{L, B, G\}$ are consistent with Equation 12 and that $x_L^* < x_G^*$. Then*

1. $D(y) = \{s \in S : y - s \in [x_L^*, x_G^*]\}$,
2. Concavity of h , $f(y - x_L^*) > 0$, $f(y - x_G^*) > 0$, and

$$h(0) - h\left(\frac{x_G^* - x_L^*}{2}\right) \geq c \tag{25}$$

jointly imply satisfaction of PD-c, y .

Proof: **Item 1.** ($D(y) = \{s \in S : y - s \in [x_L^*, x_G^*]\}$.)

Suppose that s is such that $x_L^* \leq y - s \leq x_G^*$. Thus, $y - s - x_G^* \leq 0$, so that, for any point $x \leq y$,

$$|x - s - x_G^*| \geq |y - s - x_G^*|,$$

implying that $u_G(x, s) \leq u_G(y, s)$. Analogously, $y - s - x_L^* \geq 0$, so that, for any point $x \geq y$,

$$|x - s - x_L^*| \geq |y - s - x_L^*|,$$

implying that $u_L(x, s) \leq u_L(y, s)$. Thus, $s \in D(y)$.

Suppose that s is such that $y - s < x_L^* < x_G^*$. Then consider $x = x_L^* - s$. Because

$$0 < |y - s - x_L^*|,$$

it follows that $u_L(x, s) > u_L(y, s)$. Similarly, $y - s - x_G^* < x_L^* - x_G^* < 0$ implies that $u_G(x, s) > u_G(y, s)$. Thus, $x_L^* \in P_{LG}(s, y)$, implying that $s \notin D(y)$. The proof for s such that $x_L^* < x_G^* < y - s$ is symmetric and omitted.

Item 2. Concavity of h , $f(y - x_L^*) > 0$, $f(y - x_G^*) > 0$, and Equation 25 jointly imply satisfaction of PD- c , y .

By Item 1, $s^g \equiv y - x_G^*$ and $s^l \equiv y - x_L^*$ both belong to $D(y)$. Consider the following beliefs for the legislature:

$$\mu(s) = \begin{cases} 0.5 & \text{if } s = s^g \\ 0.5 & \text{if } s = s^l \\ 0 & \text{otherwise.} \end{cases}$$

These beliefs clearly lie within $\Delta(y)$. The expected utility of not acquiring information is then

$$\arg \max_{z \geq 0} \int_S u_L(y - z, s) \mu(s) ds = \arg \max_{z \geq 0} \frac{h(z) + h(x_G^* - x_L^* - z)}{2}$$

Concavity of h implies (by Jensen's inequality) that

$$\frac{x_G^* - x_L^*}{2} \in \arg \max_{z \geq 0} \frac{h(z) + h(x_G^* - x_L^* - z)}{2}.$$

If the legislature holds hearings, then it receives a payoff of $h(0) - c$ with certainty. Thus, the legislature's best response under μ is to holding hearings if

$$h(0) - c - h\left(\frac{x_G^* - x_L^*}{2}\right) \geq 0, \text{ or}$$

$$h(0) - h\left(\frac{x_G^* - x_L^*}{2}\right) \geq c,$$

as was to be shown. ■