A Theory of Strategic Oversight: Congress, Lobbyists, and the Bureaucracy

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This article develops a formal model of interest groups and congressional control of the bureaucracy. It shows that, even when interest groups act strategically, lobbyists can facilitate Congress's oversight role. Our results indicate that lobbying can help reduce informational asymmetries between Congress and the bureaucracy, and that the mere threat of sounding a "fire alarm" can result in policy concessions for interest groups. We demonstrate that agencies often moderate their proposals to obtain interest-group support, that interest groups will be truthful in their endorsements even with no explicit penalty for lying, and that lobbying can reduce the uncertainty surrounding policy outcomes. Moreover, when multiple interest groups lobby Congress, legislators make oversight decisions based on the range of *moderate* groups that support the agency's actions. Thus they can control administrative agencies by observing the dividing line between interest groups that support the agency's proposal and those that oppose it.

Congressional control of the bureaucracy is at best imperfect. Agencies are better informed about the details of their policy areas, making it difficult for legislators to effectively oversee their actions. Congress employs a variety of mechanisms to monitor agency behavior: notice-and-comment rulemaking, reporting requirements, and budgetary hearings, to name just a few. To be effective, however, these direct controls require a considerable amount of time and resources. A second method by which legislators can reduce informational asymmetries is to rely on outside interests to evaluate proposed agency actions. But lobbying groups will offer advice only to promote their own concerns. The question is whether interest groups, acting strategically, can help Congress control the bureaucracy.

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An answer to this question would fill gaps in two distinct literatures. The first concerns "fire alarms," that is, the ability of interest groups to ease congressional oversight by alerting legislators to bureaucratic transgressions. As originally developed, though, this theory makes little allowance for strategic play on the part of the various actors. Agencies should be able to anticipate fire alarms and adjust their policies accordingly. And if every interest-group complaint produced vigorous congressional action, many groups would have incentives to pull "false alarms." Taking into account these concerns, then, the questions are: how well are interest groups able to monitor federal agencies; who, if anyone, dominates the policy-making process; and what is the effect of interest-group oversight on final policy outcomes?

The second literature concerns the changing nature of interest-group lobbying. As the number of different organizations represented in Washington grows, interest groups must vie for influence by offering useful information to legislators. In short, the claim is that interest-group politics has moved from influence to access. One of the major battlegrounds of this new era is the bureaucracy, with some groups urging greater government activism, others pushing for less, and both sides pressing their arguments with reams of studies, reports, and statistical findings. Here, the critical questions are which groups will be successful in swaying legislators, and what are the effects of competing interest groups on policy?

This essay examines both sets of issues through a formal model of interest groups and congressional oversight of the bureaucracy. We assume that, at the outset, bureaucrats and interest groups are better informed than legislators. In the model, all actors behave strategically; thus bureaucrats can misrepresent the true effects of proposed regulations, interest groups may sound fire alarms when none are needed, and Congress will rationally discount lobbyists' claims. We then extend our model to allow for many interest groups competing for access through information provision.

Briefly, our findings are as follows. Regarding the fire alarms thesis, we show that no influential fire alarms are sounded in equilibrium. The only groups that might object to agency actions represent extreme views and are unable to influence congressional action. This does not mean, however, that agencies can make whatever policies they please. In many cases agencies rationally adjust their proposals to appease interest groups and avoid a fire alarm. On the other hand, neither do interest groups dominate the process. These groups can influence policy by their threat to sound a fire alarm, but in general they cannot achieve their most preferred policy outcome. Interestingly, from legislators' point of view the best interest-group monitor is not a group with preferences equal to those of the median legislator, but one *biased* against the agency.

Regarding interest-group competition, we find that when only a few groups actively lobby legislators, those groups with moderate preferences and with preferences biased against the agency will be most influential. When many interest groups lobby, legislators can assure themselves of favorable outcomes simply by observing where along the ideological spectrum the groups divide in their support of, or opposition to, the agency's proposal. In all cases, a greater

number of interest groups makes legislators better off, and in many cases they also make agencies better off, by reducing the uncertainty surrounding policy outcomes.

The remainder of the article is organized as follows. Section 1 reviews the relevant literature on interest groups and their role in congressional oversight of the bureaucracy. Section 2 develops a signaling model of lobbying and regulatory policy making. Section 3 presents the results with one interest group, and Section 4 extends these results to multiple interest groups. The last section summarizes our findings and concludes. Formal statements and proofs of all propositions are provided in the Appendix.

1. Literature Review

Legislators try to control agency actions through administrative procedures, such as budgeting authority, legislative vetoes, and limits on agency discretion. These procedural controls, however, can only ameliorate, but never completely resolve, the basic problem. As Moe (1989: 271) states,

> Experts have their own interests—in career, in autonomy—that may conflict with those of [legislators]. And, due largely to experts' specialized knowledge and the often intangible nature of their outputs, [Congress] cannot know exactly what its expert agents are doing or why. These are problems of conflict of interest and asymmetric information, and they are unavoidable. Because of them, control will be imperfect.

In general, Congress must solve the problem of delegating just the right amount of authority to agencies in just the right way. Too little or too tightly constrained delegation will deny Congress the benefits of agency expertise and reduced workload that motivated the initial delegation of authority. On the other hand, delegating too much power to an agency runs the risk of allowing policies to be enacted that are contrary to the wishes of legislators and their constituents. It is this trade-off between expertise and control, informational gains and distributive losses, that lies at the heart of all administrative procedures.

How do interest groups fit into this picture? Previous studies offer two views of interest groups' role in congressional–bureaucratic relations. The first view holds that interest groups help legislators monitor the bureaucracy. McCubbins and Schwartz (1984: 166) note that direct, or "police patrol," oversight may be too costly to provide a realistic check on agency actions. Instead, legislators design "a system of rules, procedures and informal practices that enable individual citizens and organized interest groups to examine administrative decisions..., to charge executive agencies with violating congressional goals, and to seek remedies from agencies, courts or Congress itself." According to this view, if an agency takes actions that are not to the interest group's liking, the group can sound a "fire alarm" to alert Congress that remedial actions are needed.[1]

1. As Weingast (1984: 155) states, "constituency groups, unlike congressmen, have both the incentive and expertise to monitor agency inputs and outputs. Congressmen judge agency success through the 'decibel meter,' i.e., by listening to constituency reactions to agency decisions."

Examples of fire alarms include gay-rights groups' protesting the military's exclusion of homosexuals from the armed forces, environmentalists challenging the Bush administration's definition of wetlands, and scores of angry parents demanding that Congress force the Federal Communications Commission to regulate the violence shown on television. Through fire alarms Congress gets the benefit of continual, watchful oversight without spending its own resources.

The second view holds that interest groups, congressional committees, and agencies form an "iron triangle" or, in less colorful terms, a subgovernment. In contrast to the fire alarm literature, the subgovernment approach assumes that interest groups and agencies have similar preferences. The essence of subgovernment politics is that policy is tailored to the needs of the special interest, which is then inspired to give generously to the legislators' campaign funds, who in turn appropriate healthy budgets for the agency.[2] All actors within the triangle are happy with this arrangement, and all actors outside the triangle are either actively prevented from intervening or are simply too disinterested to care.

Examples of policy areas traditionally characterized by iron triangles include agricultural price supports, grants to localities for airport construction, and the issuance of low-cost permits for grazing on public lands (Ripley and Franklin, 1984). Thus, the subgovernment literature emphasizes the harmony of interest between the three major actors. Where the fire alarm approach is optimistic regarding interest groups' ability to check wayward bureaucrats, the subgovernment hypothesis is distrustful of their impact on policy outcomes.

We therefore have two conflicting accounts of the interaction between interest groups, legislators, and bureaucrats. While each of these views contains more than a germ of truth, each also has significant shortcomings. The iron triangle story assumes away the problem of asymmetric information by positing that all parties have identical interests. This view might have been more appropriate to politics in the 1950s and 1960s when the array of organized interests in Washington was less diverse than today. But with the proliferation of interest groups of every stripe and color, particularly public-interest watchdog groups, it is rare to find an area safe from public inspection. Thus the cozy iron triangles that caused Lowi (1969) to herald the "end of liberalism" have dissolved into what Jones (1979) calls "at best, sloppy hexagons."

The fire alarm literature, on the other hand, paints too rosy a picture of interest-group input, ignoring the strategic aspects of information transmission. Certainly, interest groups are not reticent in making recommendations for bureaucratic action. But rational politicians realize that interest groups have incentives to misrepresent certain facts to obtain favorable policies. In short, legislators who naïvely answered every fire alarm would quickly find themselves besieged by "false alarms." Any theory of interest-group oversight therefore must combine the distributive, policy-oriented aspects of the iron triangle approach with the informational perspective of the fire alarm thesis.

2. For an excellent discussion of these issues, see Wilson (1989: chap. 5).

To build a more complete picture of interest groups' role in the policy-making process, we assume that legislators and agencies may have their own policy preferences, distinct from those of interest groups. Both the fire alarm and iron triangle approaches implicitly assume that legislators desire only to serve powerful constituents. However, the proliferation of lobbying groups makes this questionable, as there are now many important interests to which legislators must respond. Furthermore, given our separation of powers system, legislators and bureaucrats may well differ in their policy preferences. We also assert that interest groups organize and act with the express purpose of influencing policy. Sometimes this might be best accomplished by working with an agency; other times, interest groups will find themselves in opposition to the agency. In any case, just as legislators ultimately seek reelection, interest groups necessarily have final policy outcomes as their primary concern.

But what do interest groups do in order to secure policy benefits? In the "bad old days," they might only have to appear at a congressman's office with promises of campaign contributions, announce their preferred policy, and then wait for the favors to flow their way. Whether or not it was ever really this easy is a matter of some dispute, but in any case this cozy scenario is certainly inadequate to describe modern interest-group activity in Washington. Every issue of major concern draws groups from all sides, most of which have considerable resources to offer politicians and constituency connections through which to publicize their viewpoint. In addition, many formerly powerful lobbying sectors have factionalized. There are now a multitude of agriculture-related groups, many health industry representatives, scores of business lobbies, and so on, making it difficult to discern common policy goals for any sector of the economy.[3]

In this new setting, interest groups must work harder for influence. In large part, their day-to-day activities now center on gathering and distributing *information* to public officials. As Salisbury (1990: 225–6) notes,

> In today's world of complex, interdependent interests and policies, it is often quite unclear what the "true interests" of a group or an institution may be. The policy that will be maximally advantageous to an association often cannot be framed without prolonged and searching analysis. . . . Before [lobbyists] can advocate a policy, they must determine what position they wish to embrace. Before they do this, they must find out not only what technical policy analysis can tell them but what relevant others, inside the government and outside, are thinking and planning. Information, timely and accurate, is absolutely vital to the lobbyist.

3. Particularly notable in the interest-group explosion has been the proliferation of what Salisbury (1990) calls "externality groups," such as Common Cause, environmentalist groups, and the various organizations under the Nader umbrella. For an interesting in-depth look at Common Cause and its lobbying efforts on the MX missile and campaign finance reform, see Rothenberg (1992).

As a by-product of pursuing their own distributive ends, then, interest groups naturally gather information about the relation between policies and outcomes. This information is of potential use to elected officials, and in particular to legislators who are overseeing bureaucratic actions. However, legislators also realize that interest groups offer information to further their own goals, and will therefore be wary of lobbyists' statements. Often competing interest groups will offer contradictory information, and each group will support its findings with an impressive array of research. As noted by Wallich (1994: 151):

> According to the economic models that churned away for more than a year before the House vote, the North American Free Trade Agreement is one or more of the following: a brilliant maneuver that will weld the continent into a unified economic superpower, a death knell for the tattered remnants of the U.S. manufacturing sector, a vital boost for U.S. exporters, a roundabout way of redistributing income from the poor to the rich, or an economic irrelevance.

How can legislators make sense of this cacophony of voices? More generally, what is the effect of multiple, competing lobbying groups? Do they constrain legislators even more than before, or do they allow legislators to play one off against the other? Can groups reduce the informational asymmetries that allow agencies to escape congressional control? And how will agencies formulate policy given the possibility of interest-group oversight? These are the crucial questions addressed in the formal model presented below.

2. The Model

We model interest-group input in a natural way: agencies make proposals, interest groups have an opportunity to lobby Congress, and then Congress decides whether to accept or reject the proposal. Other recent models have also addressed the question of third-party signaling. Lupia and McCubbins (1994), for instance, also consider how legislators overseeing the bureaucracy can learn from strategic endorsements. However, for expositional simplicity, they do not consider the game where both agency proposals and interest-group statements are strategic. Rather, they take agency proposals as given and focus on the information contained in the interest group's message. Our model is closest to that of Cameron and Jung (1992), who investigate a setting with a sender, an endorser, and a receiver. In their model, the receiver cannot directly observe the proposal made and is thus forced to rely heavily on the endorser's message.

Our research is also related to recent articles investigating the effect of interest-group signaling on legislators' actions. In Potters and Van Winden (1992), Austen-Smith and Wright (1992), and Ainsworth (1993), interest groups must spend resources either acquiring information or accessing politicians. Thus interest-group action is a form of costly signaling; in our model these signals are cheap talk. In Banks and Weingast (1992), an agency has private information about the cost of providing some service. The authors assume that

Congress can audit the agency, and that interest groups can reduce these costs.[4] Lastly, Austen-Smith (1993) develops a model in which an interest group can lobby at the agenda-setting stage or at the voting stage. These models all show that under certain conditions, interest-group lobbying can be influential. However, they assume that the proposed policy is given exogenously. By including an agency in our model, we allow policies to arise endogenously, depending intricately on the preferences of all players.

The actors in our game are an interest group (I), an executive agent (A), and the median congressional voter (C). All actors have symmetric, single-peaked utility functions defined over the *policy space* $X = \Re^1$. Without loss of generality, assume that Congress's ideal point is $C = 0$ and that the agent has ideal point $A > 0$; the interest group's ideal point, I, will be allowed to vary. Preferences for all players are assumed to be quadratic, and hence risk averse, in final policy outcomes X:

$$U_C(X) = -(X - C)^2 = -X^2;$$

$$U_I(X) = -(X - I)^2;$$

$$U_A(X) = -(X - A)^2.$$

Outcomes depend on both *policy* (p) and a *state of the world* (ω) according to the equation $X = p + \omega$. Thus each actor has induced preferences in the policy space: the ideal policies given a particular value of ω are, respectively, $-\omega$, $I-\omega$, and $A-\omega$ for Congress, the interest group, and the agency. Note that if no policy is enacted ($p = 0$), the final outcome is ω. While policy proposals p are observable to all actors, the value of ω is initially unknown. Before the game begins, ω has a cumulative distribution $F(\cdot)$ and corresponding density $f(\cdot)$. Without loss of interesting generality, assume that $f(\cdot)$ is uniform on the $[-1, 1]$ interval; all ideal points and ex ante distributions are assumed to be common knowledge. Since $\omega \sim U[-1, 1]$, Congress will obtain its ideal point (0) in expectation if no further actions are taken.

The game is played as follows. First, Nature randomly draws a value of ω, which is observed by the *agency and interest group only*. Thus Congress begins with an informational disadvantage. After learning the value of ω, the agency chooses a policy proposal p. Next, the interest group sends Congress a *message* (m) from some finite set M of possible messages.[5] This message could be thought of as testimony at a hearing, personal lobbying, or any other means of communication between interest groups and politicians. This message is modeled as cheap talk; in particular, we assume that there is no explicit penalty for lying. After seeing the agency's proposal and receiving the interest

4. Bendor, Taylor, and Van Gaalen (1985) and Banks (1989) are other examples in which Congress can perform a costly audit of budget-maximizing agencies.

5. Instead of a finite set of messages, we could allow the message to be any element of $\Re^1$. However, the following discussion shows that the message space could be reduced to only two elements without changing the essential nature of the equilibria; hence a finite message space is adequate.

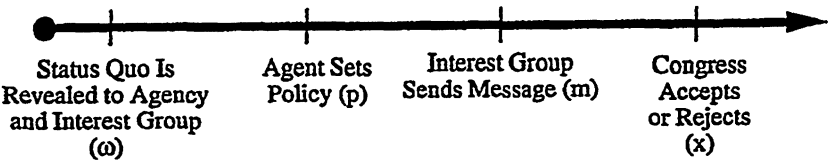

Figure 1. Sequence of events. Note: $\omega + p = X$.

group's message, Congress decides whether to exercise an *ex post veto* (V).[6] If Congress rejects the agency's proposal ($V = 1$), the outcome is ω; otherwise, the outcome is $p + \omega$. Figure 1 illustrates the sequence of events.

Strategies for each player can be defined as follows. The agency, after observing the value of ω, chooses $\pi \in \Delta X$, where for any set S, ΔS denotes the set of probability distributions over S. Thus $\pi(p; \omega)$ is the probability that the agency proposes policy p given that it has observed ω. Similarly, the interest group then chooses $\delta \in \Delta M$, so $\delta(m; \omega, p)$ is the probability that the interest group sends message m given that it has observed ω and the agency proposed policy p. Finally, Congress sets $V = 0$ with probability $r(p, m) \in [0, 1]$, so that $1 - r(p, m)$ is the probability that Congress exercises its veto given proposal p and message m. A formal definition of equilibrium strategies is provided in the Appendix.

In specifying equilibria, we will always refer to the most informative equilibrium. This usage of the Pareto criterion to reduce the number of equilibria is common in cheap-talk games (see Rabin, 1994), as there always exist equilibria in which no information at all is transmitted ("babbling equilibria"). In the present context, the more informative equilibria make all three players better off, thus eliminating any potential conflict between the players over which equilibrium is superior.

Before solving the game outlined above, we present two baseline cases for comparison: one with no interest group and complete information about ω, the other with no interest group and incomplete information. In the first game, the agency makes a proposal, and Congress, *knowing the value of* ω, decides whether or not to accept it. This game is just the familiar Romer-Rosenthal (1978) closed rule offer game, with ω playing the role of the status quo. In the second game, the agency proposes a policy and the floor must accept or reject it *without knowing the value of* ω. This game is identical to the closed rule game with committee specialization considered by Gilligan and Krehbiel (1987; hereafter GK), in their seminal paper on uncertainty and institutional design.

Note that these two games differ only by Congress's level of information. The

6. We assume that legislators can block the implementation of a policy with which they disagree. Often personal communication will be sufficient to accomplish this; otherwise threats of budgetary retaliation or the passage of new legislation may be required.

difference in expected outcomes between the games, then, serves as an indicator of how an agency's superior information allows it to escape legislative control. These results are summarized in Proposition 1.

Proposition 1 (No Interest Group). In the game with no interest group and an agency with ideal point $A > 0$,

(i) If Congress has complete information, the expected outcome is $A - (A^2/2)$;

(ii) If Congress has incomplete information, the expected outcome is A.

From the proposition, we see that an agency's issue-specific expertise allows it to evade congressional control by a factor of $A^2/2$, which increases as the agency's ideal point becomes more extreme relative to Congress. Proposition 1 confirms the logic suggested in the introduction: Congress's problems in bureaucratic oversight are compounded by informational asymmetries. On the other hand, agency decision-making reduces the uncertainty in final policy outcomes, and since all actors are assumed to be risk averse, this benefits legislators. Thus there are two important issues in evaluating different institutional arrangements: the location of expected outcomes in the policy space (which is inherently zero-sum) and the variance around this mean (which is positive sum).

To acquaint the reader with the mechanics of solving signaling models, we illustrate the Gilligan-Krehbiel equilibrium in Figure 2. The possible values of ω (-1 to 1) are plotted on the horizontal axis; on the vertical axis are possible policies. If no action is taken, the policy adopted is $p = 0$, so the horizontal axis represents outcomes under the status quo, as well as those outcomes that would result from a veto. The solid diagonal lines represent the most preferred policies for the agency and floor as a function of ω: $p = A - \omega$ and $p = -\omega$. As ω rises, these preferred policies fall, thus producing the negatively sloped lines in the figure.

To make the equilibrium more transparent, we include the dashed lines in Figure 2. These lines are drawn so that for any ω, the policy on the dashed line is twice as far from 0 as the solid line: $p = A - 2\omega$ and $p = -2\omega$. Thus the players are indifferent between any point on their dashed line and the status quo. We term the regions bounded by Congress's and the agency's dashed lines the *acceptance region* and the *proposal region*, respectively. All equilibrium proposals must lie within the proposal region and yield expected outcomes within the acceptance region.

Equilibrium proposals are shown in bold lines in Figure 2. As seen in the figure, when ω falls between $-3A$ and $-A$, the agent proposes $p = 4A$, and when ω is between $-A$ and A, the agent proposes the status quo, $p = 0$.[7] The horizontal line drawn at $p = 4A$ has the unique property that its midpoint lies on the boundary of the acceptance region and its endpoint lies on the boundary

7. In general, values of ω between C and A will result in the status quo, since a gain for one player necessarily entails a loss for the other. And values of ω greater than A will yield an outcome of A, given the agency's monopoly agenda-setting power. We therefore concentrate on explaining outcomes for values of less than C.

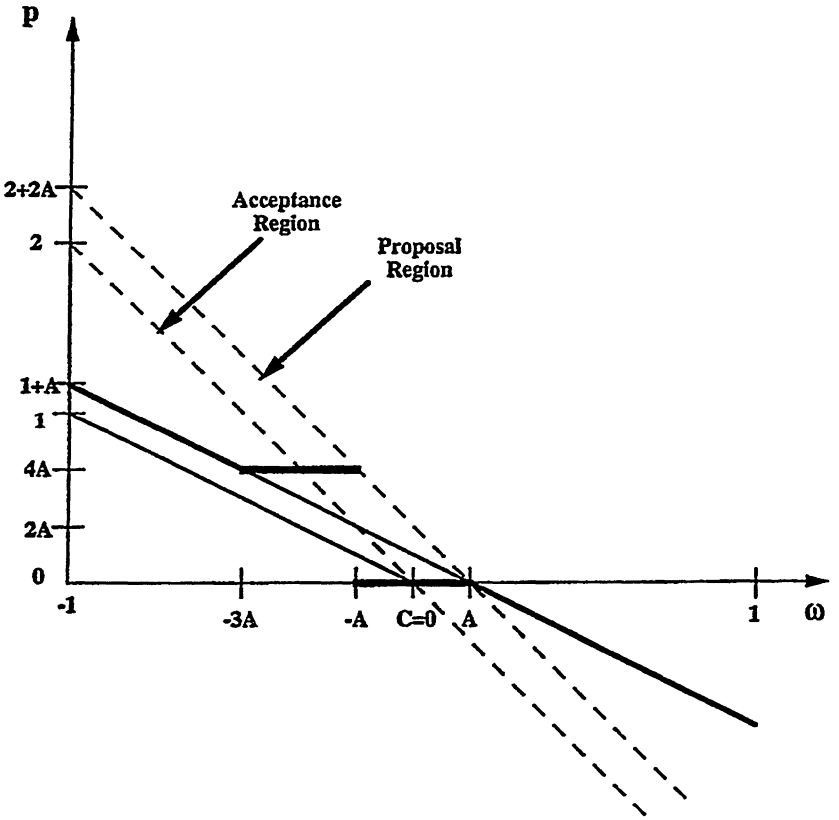

Figure 2. Equilibrium with no interest group.

of the proposal region. Thus, when $\omega = -A$, the agency is indifferent between proposing $p = 4A$ and $p = 0$; this is the key indifference property mentioned above for all equilibria of this type.

The implication of the game with no interest groups is that bureaucratic expertise gives executive branch agencies the upper hand. Congress thus faces a dilemma; it delegates power to bureaucrats in part to take advantage of their technical expertise, but this very expertise helps agencies escape from congressional control. Can interest groups, even self-interested and strategic ones, provide legislators with a low-cost yet effective means of controlling the bureaucracy? Section 3 investigates this question by adding interest-group lobbying to the basic model.

3. Interest Groups and Congressional Oversight

Lobbying has the potential of reducing the agency's informational advantage relative to Congress. After the agency makes a proposal, the interest group now

has an opportunity to send Congress a message. In equilibrium, the content of this message boils down to either "Accept the proposal" or "Reject the proposal."[8] The questions that must be answered, then, are whether or not Congress listens to the interest group's advice, which proposals the interest group decides to endorse, what are the agency's equilibrium policy proposals, and who gains ex ante with interest-group input? There are three cases to consider, depending on the location of the interest group's ideal point relative to those of Congress and the agency. We analyze each in turn.

3.1 Case 1: Fire Alarms

First consider the case where the interest group is predisposed to take policy positions contrary to those of the agency ($I < C < A$). Here, interest-group support of any agency proposal will gain credibility since the endorsement comes from the opposite side of the political spectrum. We call this a *confirmatory signal*, and it provides strong evidence that the proposal is indeed worthwhile, much as bipartisan support for legislation sends a clear signal about the bill's desirability.[9] This suggests that more information can be transmitted in equilibrium with the interest group than without. The resulting equilibrium—which is illustrated for sample values of I, C, and A in Figure 3—confirms this intuition.

Proposition 2 (Fire Alarms). The equilibrium for the game where $I < C < A$ is

(i) Agencies moderate their proposals to gain interest-group support;

(ii) The interest group is truthful; it endorses only those proposals that it prefers to the status quo;

(iii) For some proposals, Congress bases its veto decision exclusively on the interest group's endorsement; for others, it depends only on the proposal itself.

Figure 3 is similar to Figure 2, except for the inclusion of the interest group.[10] For any ω, the interest group's most preferred policy is $I - \omega$. This set of preferred policies is represented by the solid diagonal line running through I's ideal point. As before, we have added a dashed line with twice the slope of I's preferred policy. We call the area bounded by this dashed line the *endorsement region*, since the interest group will not truthfully endorse any policy outside that region. We thus have three conditions that an equilibrium with confirmatory signaling must satisfy: all proposals must fall within *both* the proposal region *and* the endorsement regions, and the expected outcome under any policy must fall within Congress's acceptance region.

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8. The logic behind this is not difficult. After receiving the interest group's message Congress will either veto the proposal or let it pass. Thus the set of all messages that induce a veto is equivalent to the single message "Veto" and likewise for all messages that result in no veto. See Lemma 1 of Cameron and Jung (1992) and Proposition 2.2 of Austen-Smith (1993) for similar results.

9. See Gilligan and Krehbiel (1989) and Epstein (1993) for other models with confirmatory signaling. The present case is identical to the setting analyzed by Gilligan and Krehbiel (1989), with a closed rule instead of a modified rule.

10. In this example, $I = -A$, but this will not be true in general.

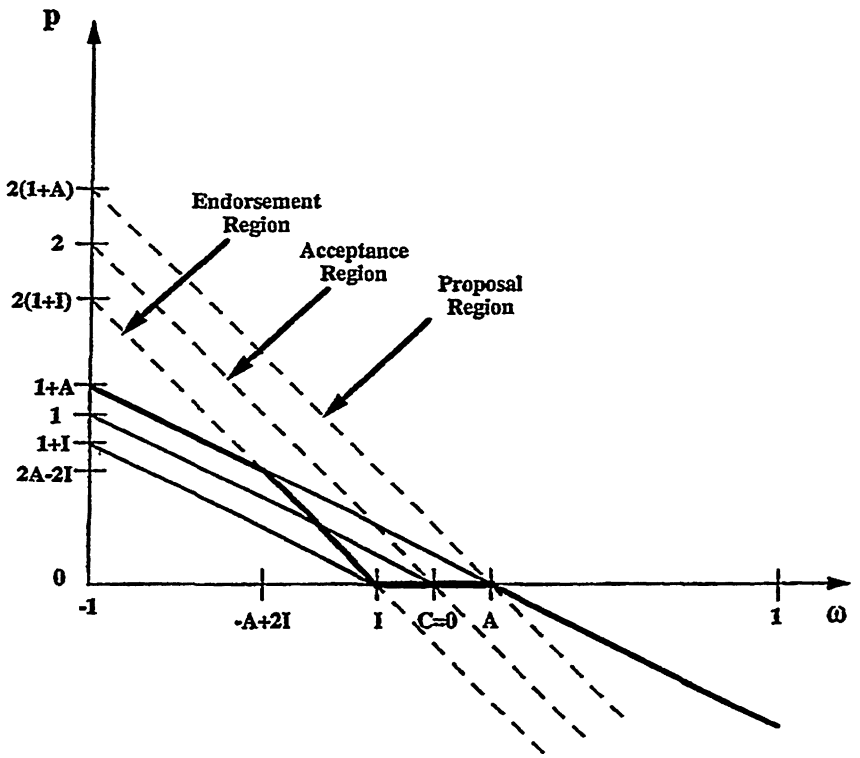

Figure 3. Equilibrium with fire alarms.

The bold lines in Figure 3 show the equilibrium proposals. Notice that for values of ω between $-A+2I$ and I, equilibrium proposals run along the edge of the endorsement region. This indicates that the agency strategically alters its proposals to just avoid the interest group's sounding a fire alarm. Such accommodation moves final outcomes closer to those preferred by Congress and the interest group. Calculations reported in the Appendix show that expected outcomes are shifted toward Congress's ideal point, and the uncertainty surrounding outcomes is reduced.

In Proposition 2, legislators always follow the interest group's advice for the key set of proposals between $p = 0$ and $p = 4A$. In the terminology of Austen-Smith (1993), interest-group lobbying in this range is both informative and influential. Similarly, the interest group truthfully endorses only those policies that it actually prefers to the status quo, even though we assumed no explicit penalty for lying. Since this also emerged as an equilibrium requirement, we can say that the interest group is *strategically truthful.* Further, notice that no fire alarms are ever sounded in equilibrium. Since the agency knows the interest group's ideal point, it formulates proposals that will avoid a fire

alarm and the ensuing ex post veto. This highlights the fact, relevant to all lobbying circumstances, that interest groups need not make explicit demands to receive policy benefits; influential groups are accommodated from the start as a prerequisite to obtaining congressional approval.

Two additional comments are in order. First, if the interest group's ideal point is extreme—that is, $I < (A - 1)/2$—then Congress will ignore the interest group's message. For extreme groups, no agency proposal will ever be preferable to the status quo, so they cannot convey useful information to legislators. Thus only groups having opposing but moderate preferences can facilitate Congress's oversight of the bureaucracy.

Second, Congress's equilibrium utility is maximized when $I = -A$. This is in fact quite surprising; Congress prefers a *biased* advisor to one with preferences identical to its own. The logic behind this result is that since the agency is making the interest group just indifferent in many instances, Congress prefers that this indifference point, not the interest group's ideal point, be as close to Congress's preferred policy as possible. This result is similar to Calvert (1985), who also finds that it often pays to get information from a biased advisor. In fact, our results carry the stronger implication that legislators might rationally depend on an interest group for advice, *even if they could costlessly and independently gather information themselves.* That is, by filtering their information through biased interest groups, legislators can force strategic agencies to indirectly accommodate congressional preferences.

To see this point graphically, take Figure 3 (in which $I = -A$), and move the interest group's ideal point I closer to C. Then the thick line of equilibrium outcomes will shift to the right, after first running along the agency's line of most preferred policies. The key is the fact that as I moves closer to C, *the average distance from the set of equilibrium outcomes to Congress's line of ideal policies will increase.* That is, Congress is actually made worse off in expectation by having an interest group with policy preferences equal to its own! Again, this is an unexpected result, but it follows from the logic of the problem: the agency is held in check by the need to avoid a fire alarm, so Congress is better off with a somewhat "alarmist" interest group to offset the tendency of the agency to bias policies in its own favor.

3.2 Case 2: Collusion

We next consider the case where the interest group's ideal point falls between the preferred policies of Congress and the agency: $C < I < A$. To gain some intuition for this equilibrium, consider what happens at the dividing line between this case and the previous one; that is, when $I = C$. Here, the interest group's preferences are exactly aligned with Congress's, the endorsement region becomes identical to the acceptance region, and the interest group will always truthfully report its information. Thus, the game reduces to one where Congress is perfectly informed but the agency has monopoly agenda-setting power. This is identical to the original Romer and Rosenthal (1978) model discussed in Proposition 1, where the proposer either gets his ideal point or makes the receiver indifferent between his proposal and the status quo.

Once the interest group's ideal point moves just to the right of C, however, legislators can no longer accept interest-group endorsements uncritically. Since I and A are on the same side of C, the interest group and agency now have common interests, and if Congress accepted all endorsements, the interest group and agency would have incentives to *collude* against Congress. The interest group's endorsement therefore no longer can serve as a confirmatory signal.

This does not mean, however, that the interest group is no longer influential. In fact, in equilibrium Congress still follows all interest-group suggestions, and the agency tailors policy to garner interest-group support. But given the possibility of collusion, Congress must be more wary than before. Endorsements are accepted only if the proposal made is in the set of equilibrium proposals (defined below), and the interest group's signal is less informative than before. The equilibrium is presented in Proposition 3.

Proposition 3 (Interest-Group/Agency Collusion). The equilibrium to the game where $C < I < A$ is given by

(i) The possibility of agency/interest-group collusion makes final policy outcomes more uncertain;

(ii) Interest group endorsements are truthful;

(iii) Congress relies on both the interest group's endorsement and the specific policy proposal when deciding whether or not to veto.

Figure 4 illustrates this equilibrium for sample values of C, I, and A. Notice that, as before, the agency receives its ideal point for extreme values of ω. But now, instead of smoothly declining proposals, we see a series of "stair steps" leading down to the horizontal axis. These steps each have the property that their midpoint lies on the border of the acceptance region and their end point lies on the border of the endorsement region. These steps are similar to the noisy signaling regions in the original Crawford and Sobel (1982) article, but instead of being constrained by the ideal points of a sender and receiver, the stairs are constrained by the preferences of the receiver and endorser.

The impact of interest-group lobbying in this case can be determined by comparing this equilibrium to the GK game described in Proposition 1. As the ideal point of the interest group becomes closer to that of the agency, the equilibrium contains fewer and fewer stairs, and each stair becomes longer. However, the GK equilibrium had the equivalent of only one stair. This indicates that interest-group lobbying is still informative, reducing the agency's informational advantage. Once again, within a certain range, legislators follow interest groups' advice, and these recommendations are always truthful.

3.3 Case 3: False Alarms

Lastly, we examine the case where the interest group's preferences are more extreme than the agency's: $C < A < I$. Consider the dividing line between this case and the previous one, when $I = A$. As explained above, when I moves toward A, there are fewer and fewer stair steps. When $I = A$, there is only one step, and we have reproduced the original GK equilibrium.

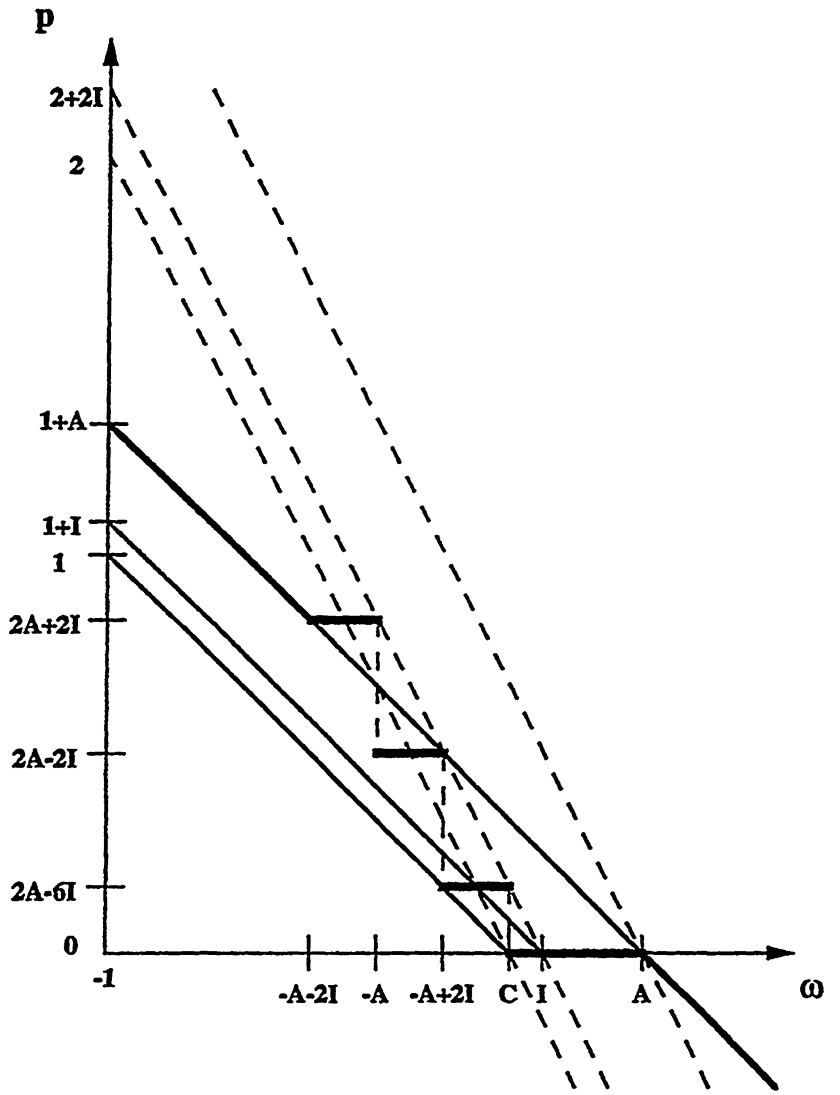

Figure 4. Stair-step equilibrium under collusion.

As I rises above A, the interest group can no longer influence the policy-making process, and the equilibrium reverts in all cases to the GK equilibrium. Of course, the interest group is free to tell Congress to veto or support agency proposals; the only difference is that Congress will pay no attention. Interest groups can still pull fire alarms, but they will carry about as much weight as do car alarms on a busy city street. We term these "false alarms" to distinguish them from the influential fire alarms of the previous two equilibria. We can thus state Proposition 4.

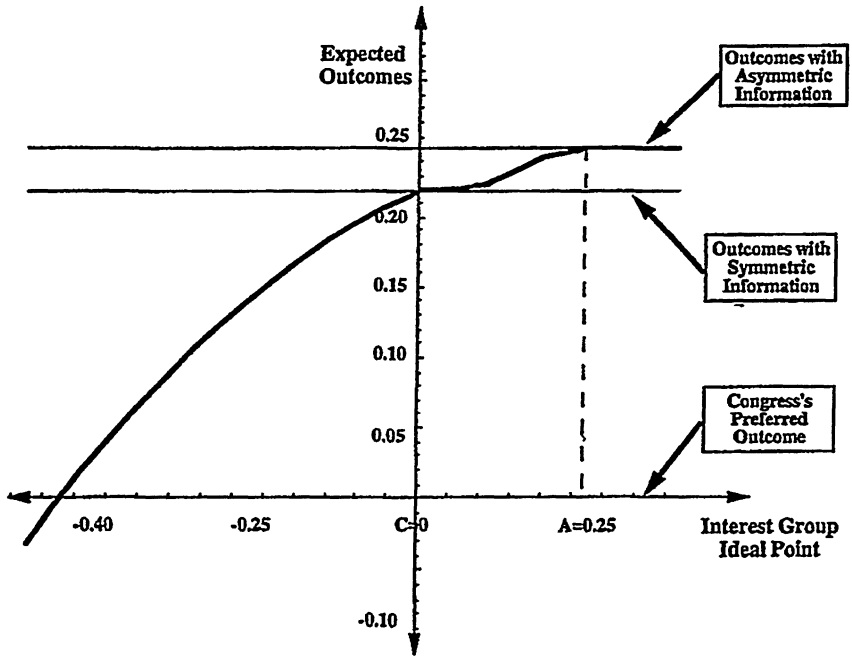

Figure 5. Outcomes as a function of the interest group's ideal point.

Proposition 4 (False Alarms). The equilibrium to the game where $C < A < I$ is given by:

(i) Proposals are identical to those in the GK equilibrium;
(ii) The interest group may or may not sound a fire alarm;
(iii) Congress ignores all interest-group input.

Of course, just as an interest group in this equilibrium can send false alarms, it can also endorse proposals that Congress will support anyway, thereby creating the illusion of influence. But in equilibrium the interest group's message is neither informative nor influential.

3.4 Summary

We summarize the equilibria from Propositions 2 through 4 in Figure 5, which shows expected outcomes as a function of the interest group's ideal point. In the figure, ideal points are shown on the horizontal axis; Congress's ideal point is $C = 0$ and the agency's is $A = 1/4$. The vertical axis represents expected outcomes, where Congress prefers an expected outcome of 0. The two baseline cases from Proposition 1 are also indicated as horizontal lines: the GK equilibrium, with asymmetric information, at $A = 1/4$; and the Romer-Rosenthal equilibrium, with symmetric information, at $A - (A^2/2) = 7/32$.

Thebold line indicates expected outcomes as a function of the interest group's ideal point, I. When $I \geq A$, we have the false alarms case, and outcomes are identical to those in the GK equilibrium. When $I = 0$, we have the Romer-Rosenthal equilibrium, and $I < 0$ is the fire alarms case. Although the graph of expected outcomes crosses the horizontal axis near $I = -0.40$, Congress's overall utility is actually maximized when $I = -1/4$, as legislators care not only about expected outcomes, but also about the variance around those outcomes.

Overall, then, the analysis in this section shows that interest groups can aid congressional oversight of the bureaucracy by providing information about policy outcomes. But their ability to do so depends on a number of strategic factors, including the preferences of the interest group relative to those of Congress and the bureaucracy. Influential fire alarms are an out-of-equilibrium phenomenon, but their potential is enough to moderate agency proposals. And final outcomes are not dominated by any one player; they represent a compromise among actors.

4. Multiple Interest Groups

As noted in the introduction, the current policy-making environment features a profusion of interest groups. Accordingly, we now extend our previous results to the case of multiple lobbyists. When more than one group offers Congress advice, legislators must be able to sort out the various messages. The difficulty of this task is compounded by the fact that the messages may be contradictory, and each group is naturally looking after only its own concerns. Which groups will be influential in this process, and which will be ignored? Can a chorus of groups, not necessarily singing in harmony, facilitate legislators' oversight of federal agencies? This section shows that they can, as long as legislators make interest-group influence contingent on the agency's proposal. We begin by analyzing the case of two interest groups, and then extend our results to many groups.

Assume first that only two interest groups lobby legislators. Each group can be one of the three types considered in the previous section—fire alarm, collusive, or false alarm—making nine possible combinations in all (fire alarm/collusive, false alarm/false alarm, and so on). In eight of these combinations, one interest group provides no useful advice in equilibrium, while the other acts as in Propositions 2 through 4. For instance, with one collusive interest group ($C < I < A$) and one false alarm ($C < A < I$), the agency and collusive group make proposals and endorsements as in Proposition 3, and the false alarm group babbles. Thus in eight of nine cases, the inclusion of a second interest group leaves the equilibria derived above substantively unaltered.

The one exception is when there are two fire alarm–type interest groups ($I_1 < I_2 < C < A$) offering Congress advice; that is, two groups both opposed to the agency ex ante. Here, in equilibrium, one interest group's endorsement is critical in one range of policy proposals, whereas the other group is influential in another range. Figure 6 illustrates one such equilibrium for sample values of I_1 and I_2. Congress accepts proposals between 0 and $\chi_{1,2}$ only if interest

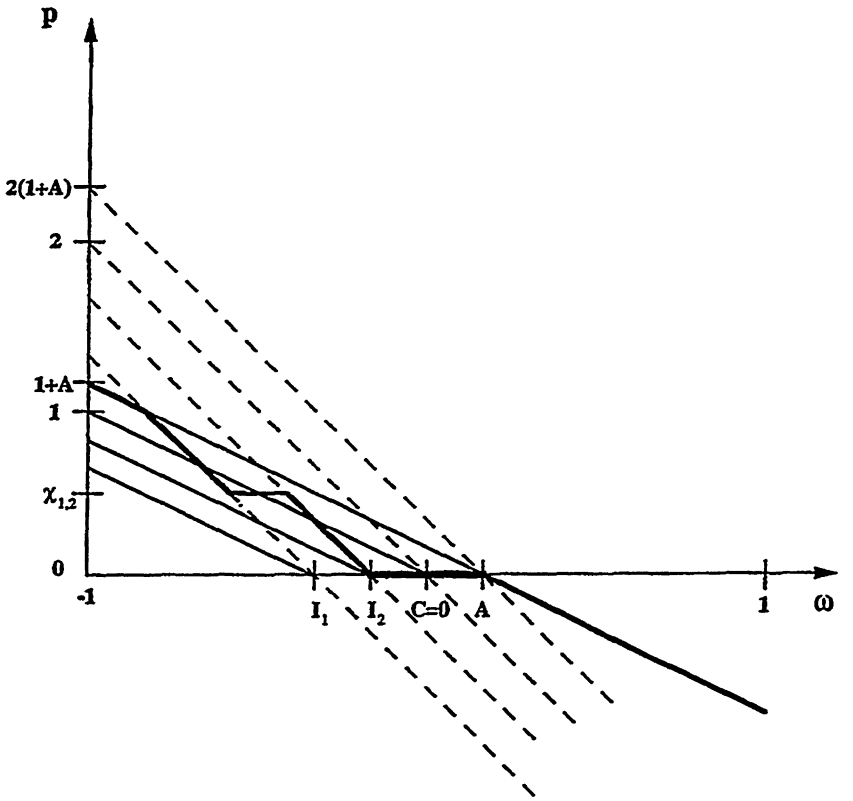

Figure 6. Equilibrium with two fire alarms.

group 2 endorses them, and accepts proposals between $\chi_{1,2}$ and 1 only if both groups 1 and 2 endorse them.[11]

Note that the equilibrium proposals are closer to Congress's ideal policies than when only one interest group makes endorsements. These results suggest that legislators can monitor agencies more effectively by allowing different interest groups to be decisive for different ranges of agency proposals. Also, the importance of an interest group's endorsement depends on the proposal made. For moderate proposals (between 0 and $\chi_{1,2}$), the message of interest group 1 has no influence on legislators. But other proposals (between $\chi_{1,2}$ and 1) require both groups' support to be ratified. Thus, *even extremist interest groups can have valuable input into the political process by acting as a confirmatory signal for certain policy proposals.* For instance, Congress would be less likely to challenge a Food and Drug Administration decision to keep a promising

11. It is clear from Figure 6 that there will be many similar equilibria; the cut point χ could take on any value between 0 and $2A - 2I_1$.

new AIDS treatment off the market if even the members of ACT-UP (AIDS Coalition to Unleash Power) agreed that it was too dangerous.

In the limit, we can extend these results to a continuum of interest groups, with ideal points ranging from -1 to 1. As usual, when ω falls between C and A, no policy movement is possible, and when $\omega > A$, the agency gets its ideal point, just as before. But an equilibrium now exists in which Congress obtains its ideal point for all values of $\omega < 0$. The key interest groups in this equilibrium are those with ideal points between $-1/2$ and 0; that is, the *moderately opposed* interest groups.[12] By observing how these groups divide on an issue, legislators can gain information about the agency's proposal. We summarize these results in Proposition 5.

Proposition 5 (Multiple Interest Groups).
(A) With two interest groups,

(i) If at most one group is a fire alarm type ($I < 0$), then outcomes are as in Propositions 2 through 4, with one group babbling;

(ii) If both groups are fire alarm types, Congress can increase its oversight capabilities by allowing each group's recommendation to be decisive for different ranges of policy proposals.

(B) With a continuum of interest groups,

(i) Congress obtains its ideal point whenever $\omega < 0$;

(ii) Congress decides whether to exercise its veto by observing which of the "moderately opposed" interest groups support the proposal.

Note that, in equilibrium, more extreme proposals require more interest group support for congressional approval. For instance, Congress will accept an agency proposal of $\hat{p}$ only if interest groups with ideal points $-\hat{p}/2$ and above endorse it, as indicated in Figure 7. The more radical an agency proposal, the broader the spectrum of interest-group support it must garner. The logic is that extreme policy measures will be acceptable to politicians only as necessary remedies for extreme circumstances; that is, high values of p to counterbalance low values of ω.

One implication of Proposition 5 is that agencies will accommodate only moderate interest groups. For example, when the environmental side agreements to the North American Free Trade Agreement (NAFTA) were being negotiated, the Clinton administration was unconcerned with the reaction of the Sierra Club, which had proved itself implacably opposed to the agreement.[13] However, the administration was solicitous of more moderate environmental concerns. In fact, after the side agreements were announced, seven major environmental groups, headed by the Natural Resources Defense Council and the Environmental Defense Fund, expressed their support for NAFTA.

Another way of describing the continuous-type equilibrium is that legisla-

12. These are exactly the groups that could send the influential fire alarms of Proposition 2.

13. The Sierra Club had joined a suit by Public Citizen and Friends of the Earth to force the administration to complete an environmental impact statement before submitting NAFTA to Congress.

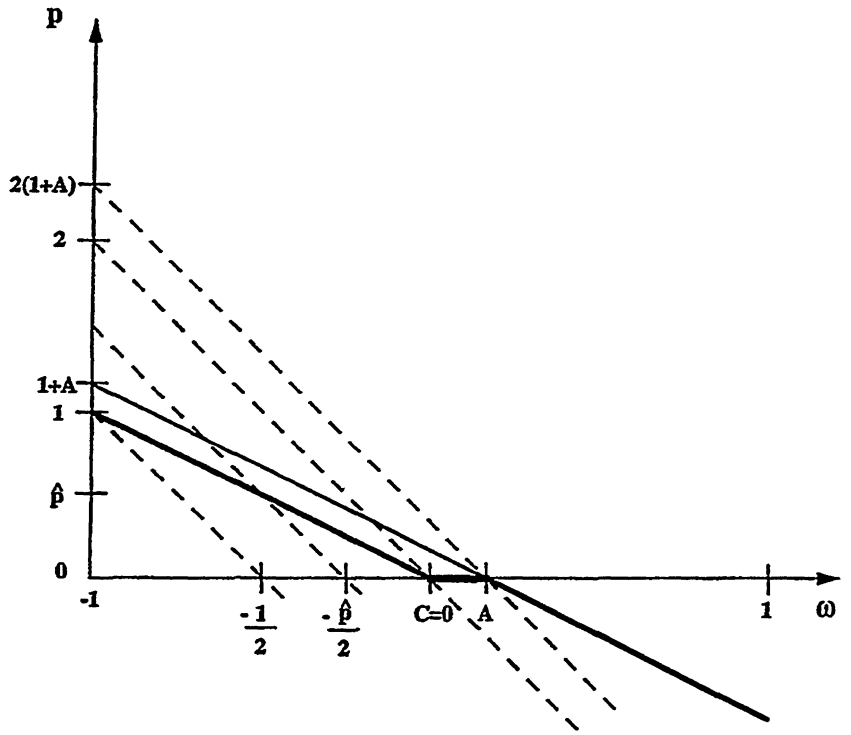

Figure 7. Equilibrium with multiple interest groups.

tors can evaluate agency proposals merely by noting the dividing line between opposing and supporting groups. This rule is reminiscent of the results in two well-known papers on the aggregation of information through political processes. In McKelvey and Ordeshook (1985), uninformed voters observe a series of polls showing support for two rival candidates. The point that divides the opinions of the informed voters provides uninformed voters with successively more accurate information about the candidates' positions, until ultimately all voters are informed. In Lohmann (1993), some citizens experience a negative event, and subsequently have an opportunity to protest through a collective demonstration. In equilibrium, some citizens always show up at these rallies and some never attend. Thus it is the number of nonregular protesters that conveys information to political leaders. Similarly, in our model, it is the range of "moderately opposed" interest groups ($-1/2 < I < 0$) that drives outcomes.

5. Conclusion

Questions of congressional oversight naturally involve a trade-off between informational and distributive concerns. Congress delegates authority to avail itself of bureaucratic expertise. But legislators worry that agencies will use their

informational advantage strategically, enacting policies different from those that Congress would prefer were it fully informed. This analysis examines the extent to which interest groups can mitigate these informational losses.

We develop a model in which interest groups provide legislators with information about bureaucratic policy initiatives. Our analysis shows that lobbying facilitates bureaucratic oversight. We also demonstrate that agencies alter proposals to obtain interest-group endorsements; that no influential fire alarms are ever observed in equilibrium; that the possibility of interest-group/agency collusion inhibits information transmission; that legislators prefer interest groups with preferences biased against the agency; and that when multiple lobbyists offer advice, legislators base their oversight decisions on which *moderate* interest groups support the agency's proposal.

These results have interesting implications for the study of so-called "iron triangles." Note that in many of the equilibria presented above, agencies make proposals, interest groups endorse these proposals, and Congress does not overturn them, just as the theory of iron triangles predicts. Yet the results are not necessarily to either the agency's or the interest group's advantage; in fact, they may well reflect conflict between the group and the agency, which is resolved by the agency's strategically accommodating interest-group demands. Thus behavior typical of iron triangles does not necessarily carry any specific implications for policy outcomes.

In technical terms, our analysis contributes to the theory of third-party signaling by endogenizing policy proposals and allowing for many groups to lobby legislators. Our model might be extended to analyze the role of the Solicitor General making recommendations to the Supreme Court, interest groups advising voters which candidate to vote for, party and committee leaders suggesting to floor members which amendments are worthwhile, or the mass media informing viewers about current political events.

A word should be said about our use of equilibrium refinements. As mentioned above, we employ the Pareto criterion to derive unique equilibria in our propositions. The Pareto criterion says that if one equilibrium makes all players better off than any other equilibrium, then we should expect to see that one chosen. This is a fairly standard method of proceeding when confronted with multiple equilibria; nonetheless, since our main conclusions deal with the informational role of interest groups, we must be careful about interpreting our results. Propositions 2 through 5 show that interest-group oversight creates the *possibility* that Congress will be able to monitor the bureaucracy more effectively. Since we analyze a cheap-talk game, however, equilibria always exist in which the interest groups provide no useful information. We could resolve this tension by saying that as the interest group's ideal point changes, the *entire range of equilibria* becomes more informative, and oversight becomes more effective.

Our model has a number of limitations. First, it abstracts away much of the institutional structure of Congress. In calling C "the median congressional voter" we have deliberately left vague whether this is the median floor voter, the median committee or subcommittee voter, or the median member of some

legislative coalition that is interested in the relevant policy area. In addition, our model does not address many significant aspects of lobbying. Most importantly, in this study interest groups can only offer information. The ability of groups to make campaign contributions, promise bureaucrats future employment, and organize grassroots support for their positions is not considered.

Nonetheless, our results do have a number of important implications for the theoretical study of lobbying: interest groups are strategically truthful in our model, without assuming either repeat play or an explicit penalty for lying; moderate oppositional groups are the most influential lobbyists; and interest groups may be accommodated by agencies without ever having to sound a fire alarm. In short, even though interests are not always able to dominate policy outcomes, access to the legislative process through informational lobbying can result in concrete policy gains.

Appendix: Definitions and Proofs

A.1 Equilibrium Definition

Let $\mu(\omega)$ be Congress's posterior beliefs over ω after receiving the interest group's message. In defining an equilibrium to this game, it is useful to first calculate the expected utilities of all players for a given set of strategies. Given beliefs μ,

(i) Congress has expected utility

$$U_C(r; m, p) = r \int_\omega U_C(p+\omega)\mu(\omega; m, p)\, d\omega + (1-r) \int_\omega U_C(\omega)\mu(\omega; m, p)\, d\omega;$$

(ii) the Interest Group has expected utility

$$U_I(m; r, \pi, \omega) = \int_\omega [r(m, p)U_I(p+\omega) + (1-r(m, p))U_I(\omega)]\pi(p; \omega) f(\omega)\, d\omega;$$

(iii) and the Agency has expected utility

$$U_A(p; \delta, r, \omega) = \sum_{m \in M} \delta(m; p, \omega)[r(m, p)U_A(p+\omega) + (1-r(m, p))U_A(\omega)].$$

The first equation says that Congress will receive its expected utility of $p+\omega$ with probability r and its expected utility of ω with probability $1-r$, all taken with respect to its updated beliefs μ. Note that Congress bases its decisions on the message received and the policy proposed only; it cannot directly observe ω. The interest group does observe both p and ω, as does the agency. Both their utilities are calculated with respect to the various messages the interest group can send, weighted by the probability distribution δ, and the various policies the agency can propose, weighted by π. Using these results, we can state Definition 1.

Definition 1. A perfect Bayesian equilibrium is characterized by strategies π^*, δ^*, and r^* and beliefs μ^* that satisfy

(i) $\pi^*(p;\omega) > 0 \Leftrightarrow p \in \arg\max_p U_A(p;\delta^*, r^*)$;

(ii) $\delta^*(m;\omega, p) > 0 \Leftrightarrow m \in \arg\max_m U_I(m;\pi^*, r^*)$;

(iii) $r^*(p, m;\mu) \in \arg\max_r U_C(r;\pi^*, \delta^*)$; and

(iv) beliefs μ^* are consistent with Bayes's rule, p^*, and δ^*:

$$\forall p \quad \text{such that} \int_\omega \pi^*(p;\omega) f(\omega)\, d\omega > 0, \quad \text{and}$$

$$\forall m \quad \text{such that} \int_\omega \delta^*(m;\omega, \pi^*) f(\omega)\, d\omega > 0,$$

$$\mu^*(\omega;\pi^*, m) = \frac{f(\omega)\pi^*(p;\omega)\delta^*(m;\omega,\pi^*)}{\int_\omega \pi^*(p;\omega)\delta^*(m;\omega,\pi^*) f(\omega)\, d\omega}.$$

These conditions require that each player's equilibrium strategy be optimal given all other players' equilibrium strategies, and that Congress update its beliefs over ω rationally according to Bayes's rule. Note that this updating applies only to those messages that might be sent in equilibrium; Congress's interpretation of out-of-equilibrium messages is not constrained in a perfect Bayesian equilibrium. Since in all equilibria, the agency proposes a unique policy for each observed ω, we will write $p^*(\omega)$ rather than $\pi^*(\omega) = 1$ for simplicity. We now formally state and prove the main propositions in the text.

A.2 Proposition 1

An equilibrium to the game with no interest group and asymmetric information is characterized by

(i)

$$p^*(\omega) = \begin{cases} A - \omega & \text{for } \omega \le -3A \text{ and } \omega \ge A \\ 4A & \text{for } -3A \le \omega \le -A \\ 0 & \text{for } -A \le \omega \le A \end{cases};$$

(ii)

$$r^*(p) = \begin{cases} 1 & \text{for } 0 \le p \le 4A \\ 0 & \text{otherwise} \end{cases}$$

(iii) Expected outcomes $E(X) = A$, with variance $\text{Var}(X) = (4A)^3$.

Proposition 1 is identical to Proposition 5 from Gilligan and Krehbiel (1987); the reader is directed to the proof presented there.

As for the Romer-Rosenthal game, expected outcomes are given by

$$E(X) = \int_{-1}^{-A} (A - \omega) f(\omega)\, d\omega + \int_{-A}^{0} (-2\omega) f(\omega)\, d\omega$$

$$+ \int_0^A (0) f(\omega)\, d\omega + \int_A^1 (A - \omega) f(\omega)\, d\omega$$

$$= A - \frac{A^2}{2}.$$

A.3 Proposition 2

Let the message space be $M = \{Y, N\}$. A perfect Bayesian equilibrium for the game where $I < C < A$ and $I \geq (A-1)/2$ is

$$p^*(\omega) = \begin{cases} A - \omega & \text{for } \omega \leq 2I - A \text{ and } \omega \geq A \\ 2I - 2\omega & \text{for } 2I - A \leq \omega \leq I \\ 0 & \text{for } I \leq \omega \leq A \end{cases}$$

$$\delta^*(Y; \omega, p) = \begin{cases} 1 & \text{if } p > 0 \text{ and } p \leq 2I - 2\omega; \\ 0 & \text{if } p > 0 \text{ and } p > 2I - 2\omega; \\ [0, 1] & \text{otherwise} \end{cases}$$

$$r^*(p, m) = \begin{cases} 1 & \text{if } p \leq 0 \text{ or if } p > 0 \text{ and } m = Y; \\ 0 & \text{if } p > 0 \text{ and } m = N. \end{cases}$$

Proof. We show that each strategy in turn is optimal given other players' strategies. Let

$P_I = \{(\omega, p), |p - (I - \omega)| \leq |0 - (I - \omega)|\}$ be the endorsement region for interest groups of type I,
$P_C = \{(\omega, p), |p - (-\omega)| \leq |0 - (-\omega)|\}$ be Congress's acceptance region,
$P_A = \{(\omega, p), |p - (A - \omega)| \leq |0 - (A - \omega)|\}$ be the agency's proposal region, and
$A^*(\omega) = A - \omega$ be the Agency's preferred policy for any value of ω.

(i) Given δ^* and r^*, proposing $p \notin P_I$ is equivalent to proposing 0. $A^*(\omega) \leq 2I - 2\omega$ implies:

$$A - \omega \leq 2I - 2\omega;$$

$$\omega \leq 2I - A.$$

Thus for $\omega < 2I - A$, $p^* = A^*(\omega)$. Similarly for $\omega > A$, $A - \omega > 2I - 2\omega \Rightarrow p^* = A^*(\omega)$.

For $2I - A \leq \omega \leq I$, A must solve

$$\max_p U_A(p; \omega),$$

$$\text{s.t. } p \leq 2I - 2\omega.$$

We form the Lagrangean $\mathcal{L} = -[p - (A - \omega)]^2 - \lambda(2I - 2\omega - p)$. Then

$$\frac{\partial L}{\partial p} = -2(p - A + \omega) \cdot 1 + \lambda = 0; \qquad \text{and}$$

$$\frac{\partial L}{\partial \lambda} = -2I + 2\omega + p \leq 0.$$

Together, these imply that $p^* = 2I - 2\omega$ when $2I - A \leq \omega \leq I$. Further, $I < \omega < A \Rightarrow P_I \cap P_A = \emptyset \Rightarrow p^* = 0$.

(ii) Given r^*, $\delta^*(Y; \omega, p) = 1 \Leftrightarrow (\omega, p) \in P_I$, which is the equilibrium strategy given in the proposition.

(iii) $I < 0 \Rightarrow P_I \subset P_C$, $\forall \omega < 0$. Thus $m = Y \Rightarrow (\omega, p) \in P_C \Rightarrow r^* = 1$. So Congress will rationally follow the interest group's advice for any equilibrium proposal $p < 0$.

Expected outcomes are

$$\begin{aligned} E(X) &= \int_{-1}^{2I-A} (A - \omega) f(\omega)\, d\omega + \int_{2I-A}^{I} (2I - 2\omega) f(\omega)\, d\omega \\ &\quad + \int_{I}^{A} (0) f(\omega)\, d\omega + \int_{A}^{1} (A - \omega) f(\omega)\, d\omega \\ &= A - \frac{A^2}{2} + AI - \frac{I^2}{2}, \end{aligned}$$

where $I < 0 \Rightarrow E(X) < A$. Similar calculations show that $\text{Var}(X) < (4A)^3$, $\forall I$. Thus the shifts in both expected outcomes and variance are in Congress's favor when compared to Proposition 1.

The agency's expected utility is

$$\begin{aligned} EU_A &= -\int_{-1}^{2I-A} (0)^2 f(\omega)\, d\omega - \int_{2I-A}^{I} (A - 2I + \omega)^2 f(\omega)\, d\omega \\ &\quad - \int_{I}^{A} (A - \omega) f(\omega)\, d\omega - \int_{A}^{1} (0)^2 f(\omega)\, d\omega \\ &= \frac{2}{3}(I - A)^3. \end{aligned}$$

In the Proposition 1 equilibrium, the agency's utility is $-16/3(A^3)$. Graphing the utility difference shows that the agency's utility with the interest group exceeds its utility without the interest group whenever I is moderate relative to A.

Congress's expected utility is

$$\begin{aligned} EU_C &= -\int_{-1}^{2I-A} (C - A)^2 f(\omega)\, d\omega - \int_{2I-A}^{I} (C - 2I + \omega)^2 f(\omega)\, d\omega \\ &\quad - \int_{I}^{A} (C - \omega) f(\omega)\, d\omega - \int_{A}^{1} (C - A)^2 f(\omega)\, d\omega \\ &= \frac{2}{3}(-3A^2 + 2A^3 - 3A^2 I + I^3). \end{aligned}$$

$\frac{\partial EU_C}{\partial I} = 0 \Rightarrow I = -A$, so Congress's utility is maximized when $I = -A$. Q.E.D.

To state Proposition 3, let $a_0 = -A - 2I$, $a_i = a_{i-1} + 2I$, $p_j = 2A + 2I - 4(j-1)I$, and let N be the greatest integer such that $2A + 2I - 4NI \geq 0$. Further, let the set of equilibrium proposals be $\Theta \equiv \{p \mid p \in [0, 2A + 2I], p = 2A + 2I - 4nI, n = 1 \ldots N\}$.

A.4 Proposition 3

A perfect Bayesian equilibrium for the game where $C < I < A$ is

$$p^*(\omega) = \begin{cases} A - \omega & \text{for } \omega \leq -2I - A \text{ and } \omega \geq A \\ p_n & \text{for } a_{n-1} \leq \omega \leq a_n \\ 0 & \text{for } -A + 2(N-1)I \leq \omega \leq A \end{cases}$$

$$\delta^*(Y; \omega, p) = \begin{cases} 1 & \text{if } p \leq 2I - 2\omega \\ 0 & \text{if } p > 2I - 2\omega \end{cases}$$

$$r^*(p, m) = \begin{cases} 1 & \text{if } p \geq 2A + 2I,\ p \leq 0, \text{ or } p \in \Theta \text{ and } m = Y. \\ 0 & \text{if } 0 \leq p \leq 2A + 2I \text{ and either } p \notin \Theta \text{ or } m = N. \end{cases}$$

Proof. First, it is straightforward to show that δ^* is optimal as above, so the interest group endorses only those proposals in the endorsement region.

Next, $r^* = 1 \Rightarrow \forall p = p(\omega), \omega \in [\underline{\omega}, \overline{\omega}]$,

$$\int_{\underline{\omega}}^{\overline{\omega}} U_C(p) f(\omega)\, d\omega \geq \int_{\underline{\omega}}^{\overline{\omega}} U_C(0) f(\omega)\, d\omega;$$

$$p \leq -2\left(\frac{\underline{\omega} + \overline{\omega}}{2}\right);$$

$$p \leq -(\underline{\omega} + \overline{\omega}).$$

Thus Congress will accept proposals which are constant over some range $[\underline{\omega}, \overline{\omega}]$ only if the midpoint of the range lies in Congress's acceptance region. From the proof of Proposition 2 above, we know that this holds for all $\omega < -2I - A$, $\omega > A$.

For $p = p_1 \equiv 2A + 2I$, $\underline{\omega} + \overline{\omega} = (-A - 2I) + (-A) = -2A - 2I$, so $p = -(\underline{\omega} + \overline{\omega})$ and Congress will rationally accept these proposals. Similarly, the condition holds for all p_n, $n = 1 \ldots N$, where $N \leq \frac{2A - 2I}{4I}$.

At $\omega = a_1 = -A$, $A^*(\omega) = 2A$, and $p_1 - A^* = 2A + 2I - 2A = 2I = 2A - (2A - 2I) = A^* - p_2$, so A is indifferent between p_1 and p_2. For all other $\omega \in [a_{n-1}, a_n]$, simple calculations reveal that p_n is optimal.

The equilibrium utilities for all players cannot be calculated in closed form. Plotting them numerically against their utility in Proposition 1 showed that they were greater for all values of I and A. Q.E.D.

A.5 Proposition 4

A perfect Bayesian equilibrium for the game where $C < A < I$ is

$$p^*(\omega) = \begin{cases} A - \omega & \text{for } \omega \leq -3A \text{ and } \omega \geq A \\ 4A & \text{for } -3A \leq \omega \leq -A \\ 0 & \text{for } -A \leq \omega \leq A \end{cases}$$

$$\delta^*(Y; \omega, p) \in [0, 1]$$

$$r^*(p, m) = \begin{cases} 1 & \text{if } p \geq 4A \text{ or } p \leq 0 \\ 0 & \text{if } 0 \leq p < 4A. \end{cases}$$

Proof. This is just Proposition 1 with a babbling interest group. Q.E.D.

A.6 Proposition 5

A perfect Bayesian equilibrium for the game with a continuum of interest groups in the $[-1, 1]$ interval is:

$$p^*(\omega) = \begin{cases} -\omega & \text{for } \omega \leq 0 \\ 0 & \text{for } 0 \leq \omega \leq A \\ A - \omega & \text{for } A \leq \omega \end{cases}$$

$$\delta^*(Y; \omega, p) = \begin{cases} 1 & \text{if } p \leq 2I - 2\omega, \\ 0 & \text{if } p > 2I - 2\omega \end{cases} \qquad \forall I$$

$$r^*(p, \mathbf{m}) = \begin{cases} 1 & \text{if } p \leq 0, \text{ or } p > 0 \text{ and } m_I = Y, \\ 0 & \text{otherwise} \end{cases} \qquad \forall I \geq -\tfrac{p}{2}$$

Proof. Let the set of interest group messages be $\mathbf{m} = \{m_I\}_{I \in [-1,1]}$. Again, assuming that no player uses weakly dominated strategies, the strategies δ^* are optimal, since any deviation would trigger a veto.

Also, the strategy r^* for C is optimal. Given $\mathbf{m}^*$ and p^*, r^* yields outcomes equal to Congress's ideal point for all $\omega < 0$.

Finally, the agency cannot improve its utility. For $\omega > 0$, this is straightforward, as the agency receives its ideal point. And for $\omega < 0$, given δ^* and r^*, A can avoid a veto by proposing policy $\hat{p}$ such that an interest group with ideal point $\hat{I} = -\hat{p}/2$ will not object. Thus for this interest group it must be true that:

$$\hat{p} \leq 2\hat{I} - 2\omega$$

$$\hat{p} \leq 2\left(-\frac{\hat{p}}{2}\right) - 2\omega$$

$$\hat{p} \leq -\hat{p} - 2\omega$$

$$2\hat{p} \leq -2\omega$$

$$\hat{p} \leq -\omega.$$

As the agency maximizes its utility at $p = A - \omega$, it will optimally set $\hat{p} = -\omega$.

The equilibrium in the two-type case with at least one non–fire alarm group is a straightforward application of the Pareto criterion to the equilibria in Propositions 2 through 4. And when $I_1 < I_2 < C < A$, the equilibrium in the continuous case is sufficient to establish the existence of a cut point χ such that interest group 1 is decisive for all $\chi \leq \omega \leq 1 + A$ and interest group 2 is decisive for all $0 \leq \omega \leq \chi$. Q.E.D.

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