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Persuasive Lobbying with Allied Legislators

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Abstract: *Why do interest groups lobby allied legislators if they already agree? One possibility is that allies are intermediaries who help persuade unconvinced legislators. To study the role and value of intermediaries, I develop a formal model of persuasive lobbying where interest groups use public cheap talk and provide verifiable information to a strategically selected coalition of legislators. Interest groups face a trade-off: Lobbying aligned legislators is advantageous as they are more willing to endorse the group's preferred policy, but those who are too aligned cannot persuade a majority of their peers. The model illustrates how intermediaries are especially valuable if interest groups cannot persuade a majority themselves. Counter to previous work, the results demonstrate how a legislature's ideological composition determines the use of intermediaries. Groups may lobby intermediaries even if access to legislators is free and unrestricted.*

> "They have better access than we do because the legislators don't really trust us. If we can get our friends to do 'missionary work' for us it helps."
>
> —Interview with lobbyist (Porter 1974, 717)

Interest groups often cooperate with legislators in the lobbying process. In doing so, they frequently target their friends. This is the conclusion of a sizable empirical literature (Ainsworth 1997; Beyers and Hanegraaff 2017; Hall and Miler 2008; Hojnacki and Kimball 1998, 1999; Igan and Mishra 2014; Kollman 1997; Mian, Sufi, and Trebbi 2013). Intuitively, however, undecided legislators should get the attention of interest groups because they need to be persuaded. Why do these groups focus on their friends if they are already convinced?

One answer is that friends can be useful as intermediaries. After group contact, they can do missionary work and reach out to colleagues who are still unconvinced. But it is not obvious why interest groups sometimes lobby their friends if they can directly target undecided legislators. And, indeed, some groups ignore intermediaries and provide information without them. This article aims to help explain the seemingly conditional use of intermediaries. When and why do interest groups use intermediaries, and how do they decide which legislators to focus on?

I analyze a model of persuasive lobbying in legislatures. The main focus is on how a legislature's ideological composition determines whether interest groups use intermediaries and on which intermediaries are chosen in the lobbying process. An interest group has verifiable information and decides which coalition of legislators to approach and combines this with public cheap talk. The coalition of legislators that receives verifiable information becomes as informed as the interest group and chooses whether to publicly endorse the group's most preferred policy. That is, they endogenously decide whether to become active intermediaries. Finally, legislators collectively decide on a proposal. This setup allows me to study when and how groups select certain intermediaries to aid in persuasion. In turn, I can isolate the effect of legislators' preferences on their value as intermediaries. The selection of intermediaries based on their ideology crucially determines interest group influence.

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In my setup, groups can use one of three general strategies at their disposal. They can choose to (a) withhold their report and solely rely on cheap talk messages, (b) provide the report to every legislator, or (c) selectively provide the report to only some legislators.

Public cheap talk is influential only under certain conditions, allowing the interest group to obtain its most preferred policy without disclosing verifiable information to intermediaries (Schnakenberg 2017). If cheap talk is influential, this provides an upper bound of interest group influence. Importantly, however, this strategy does not always work in equilibrium, which necessitates the provision of verifiable information. The second strategy is to provide verifiable information to every legislator, which is a lower bound of group influence.

In the third strategy, interest groups provide verifiable information to carefully selected intermediaries. This tactic allows the group to improve upon full disclosure if the group can find allies who are sufficiently moderate to serve as intermediaries. Specifically, moderate allies allow the group to be influential without having to provide the report publicly. Such intermediaries verify a received report and then give a public cheap talk recommendation if they are convinced that the group's preferred policy should pass. Although legislators who do not obtain this report themselves remain uncertain, a majority of them update their belief sufficiently favorably and approve the proposal.

There are various other implications for the role and value of intermediaries. First, connections to certain legislators are not always valuable if there is no need for intermediaries, especially if cheap talk is influential. Second, the value of information and connections are strategic complements. Information by itself is valuable, but connections allow interest groups to do better with their information through private disclosure.[1] Third, the value of these individual connections is not always independent of one another if access to multiple legislators is necessary for optimal information provision. That is, access to either legislator *A or B* could have no value if they are individually unable to persuade a majority. But the combined access to both *A and B* could be valuable to the interest group. This is more likely to occur if legislators care about different consequences (e.g., environmental or financial) of a proposal. Finally, group competition decreases the value of intermediaries and forces groups to target more moderate allies.[2]

[1]In Bertrand, Bombardini, and Trebbi (2014), some focus lies on the "premium" lobbyists earn based on their connections and their expertise.

[2]Holyoke (2009) provides some empirical evidence for this.

Several aspects of the model and analysis are similar to related interest group research (Hall and Deardorff 2006; Schnakenberg 2017), but there are three crucial differences. First, I provide an alternative rationale for lobbying through intermediaries that relies completely on preferences instead of costs. Whether lobbying costs money does not matter at all in explaining whether intermediaries are used in the process. Second, I show that these intermediaries gain more policy information than their peers and are not simply used as messengers who forward information. That is, legislators listen to intermediaries because these intermediaries have verified certain information, and not because they are simply repeating what interest groups ask them to say. Third, and finally, disclosure through intermediaries expands the influence of interest groups in the sense that lobbying can change outcomes when models of pure cheap talk (with costly access) predict interest groups would be unable to.

Related Theories

This article is related to theories that explain how and why interest groups choose to target specific legislators. My model is not the first to provide an explanation for empirical research that finds interest groups target their allies.[3] It complements existing theories that also see lobbying as some sort of information exchange.[4]

A seminal theory by Hall and Deardorff (2006) puts forth a mechanism in which interest groups provide legislative subsidies to legislators. One interpretation of this subsidy is that it provides resources, but another could be information. In their mechanism, groups do not lobby to change the minds of legislators, but to assist them in reaching their own goals. As resources are scarce, groups can relax the budget constraints of legislators and allow them to reach their own aligned objectives. Groups are best off providing a subsidy to the most aligned legislators, without worrying about their ability to get other legislators on board. In a sense, Hall and

[3]Note, however, that there is no consensus on whether groups always target their allies. Some theoretical and empirical studies find that undecided or unfriendly legislators are targeted (Austen-Smith and Wright 1992, 1994; Gullberg 2008; Holyoke 2009; Marshall 2010).

[4]One explanation is that targeting allies counteracts competitors (Austen-Smith and Wright 1994, 1996; Baumgartner and Leech 1996). Another sees money as the basis of lobbying; see, for example, Denzau and Munger (1986), Grossman and Helpman (1994), Groseclose and Snyder (1996), Battaglini and Patacchini (2018), and Judd (2018).

Deardorff's theory is 'budget centered' and not 'preference centered.'

Hall and Deardorff (2006) can explain that interest groups target their allies, but not that allies are used as intermediaries. Another theory that does see a role for intermediaries in the lobbying process comes from Schnakenberg (2017). The main result is about the possibility of public cheap talk persuasion in a legislature and its welfare implications. A secondary result is about the selective provision of information. In Schnakenberg's mechanism of intermediary lobbying, an interest group provides *unverifiable* information to an allied legislator, who then forwards this to the legislature. The group targets an ally instead of an enemy because only an ally is willing to forward the message. The result hinges on the fact that the interest group could directly persuade the legislature if communication were free, but costly access forces her to use an intermediary to save costs.[5]

My article complements Schnakenberg (2017) by showing that (a) intermediaries can be useful even if access is free and (b) different intermediaries are targeted depending on the environment. In my model, only preferences play a central role, and budgets are unrestricted. Legislators freely use information in decision making, and in the main model, the interest group faces no cost in lobbying. Groups target allies for a different reason than in Schnakenberg (2017). If groups can directly persuade a majority of legislators, then no allies are necessary. Meeting allied legislators is advantageous when the interest group *cannot* directly persuade a majority via cheap talk. The group then exploits legislator preference heterogeneity by privately revealing verifiable information to allied legislators. Groups benefit from private meetings because these allow them to not reveal pieces of information that would, if provided publicly, lead to rejection of the group's preferred policy. A more informal interpretation of the difference between both mechanisms is that in Schnakenberg (2017), allied intermediaries only forward information, whereas in my model, intermediaries put information in "a more favorable light," which groups could not achieve without intermediaries.

The model is also closely related to a literature on persuasion in collective bodies. Again, Schnakenberg (2015, 2017) applies the canonical cheap talk model to this setting. One of the important insights is that the interest group can give positive information about the proposal and exploit disagreement among legislators. The same is true in Bayesian persuasion models, but there, groups can generally do better due to the commitment assumption (Alonso and Câmara 2016; Bardhi and Guo 2018; Chan et al. 2019). Caillaud and Tirole (2007) study a model in which an uninformed interest group strategically allows different legislators to acquire information. One of the key results is that the interest group can persuade less friendly legislators by first allowing friendly legislators to acquire information. This strategy allows the interest group to achieve a higher probability of a preferred proposal's implementation. My model differs, as I study an *informed* interest group in a *multidimensional* environment with *multiple* signaling instruments.

[5]Access may be financially costly, but more broadly, it is costly when legislators are constrained by limits in time and resources and cannot give attention to every interest group. See Hall and Wayman (1990), Austen-Smith (1995), and Cotton (2009, 2012).

The Model

An interest group S has information that is relevant for policymaking by n legislators. The legislators decide whether to pass a given proposal or uphold the status quo. S wants the proposal to pass and can transmit information via cheap talk and verifiable information. The main focus is on how S selectively provides verifiable information to maximize its interests.

For clarity of exposition, I begin by describing and analyzing a parameterized version of the model, after which I show how the results apply more generally. First, Nature draws a two-dimensional state of the world $\omega = (\omega_1, \omega_2)$, which is distributed uniformly over $[0, 1] \times [0, 1]$. Second, S observes the state. It is useful to think that S has a *report* with verifiable information. This report could be used to prove to an individual legislator what information S has. S can send this report to every legislator, send it to some subset of the legislature, or withhold it. S can also send a cheap talk message that is publicly observed by every legislator. Formally, a signal $s = (m, G)$ is a cheap talk message $m \in M$, where M is a sufficiently large set, and a report to $G \subseteq N$. For example, if there are two legislators, then G can be $\{1\}$, $\{2\}$, $\{1, 2\}$, or $\{0\}$ (no one).

Third, if at least some legislators receive a report, they observe the state as well and simultaneously decide whether to endorse the proposal via a public cheap talk message. These legislators are *intermediaries* in the lobbying process. Formally, an endorsement by intermediary $j \in G$ in favor of the proposal is denoted by $e_j = 1$, and the absence of an endorsement is denoted by $e_j = 0$.

Finally, every legislator $i \in N$ observes the group's signal s and the endorsement of every intermediary $j \in G$, denoted by $\langle e_j \rangle_{j \in G}$. Every legislator then simultaneously accepts or rejects the proposal, which passes if and only if at least k legislators accept.

The interest group's payoff is state-independent. It simply obtains a payoff of 1 if the proposal passes and 0 otherwise. The payoffs of each legislator, however, do depend on the state. If the proposal passes, legislator i earns a payoff of $v_i(\omega)$, whereas if the proposal does not pass, then every legislator's payoff is normalized to 0. I assume that $v_i(\omega)$ is a linear function of the state, that is,

$$v_i(\omega) = \alpha_i \omega_1 + \beta_i \omega_2 + C, \tag{1}$$

where $\alpha_i \geq 0$ and $\beta_i \geq 0$ measure how much legislator i cares about state ω_1 and ω_2, respectively, and $C \in \mathbb{R}$ is a constant.

It is useful to define a set of states in which legislator i receives a positive payoff if the proposal passes as $D^i = \{\omega : v_i(\omega) \geq 0\}$. Ideally, the legislator wishes that the proposal passes in and only in this set of states. Given their common prior belief about the state, legislators can be classified into two categories. There are legislators who would accept or reject without further information (*ex ante allies* or *enemies*, respectively). The puzzling part is that although *ex ante allies* are already on the interest group's side, they may be lobbied instead of those who actually need to be convinced. The solution to the puzzle is that *ex ante allies* can have an active role as intermediaries.

However, it turns out that whether an intermediary is an ally or enemy *ex ante* is irrelevant. Instead, it is important to know after which states the legislator prefers the proposal *ex post*. From the group's perspective, the probability that the state is in D^i determines how allied legislator i is.

Definition 1 (Allied Legislators). *A legislator i with payoff vector* $\langle v_i(\omega)\rangle_{\omega\in\Omega}$ *is more allied to the interest group, the greater is* $\sum_{\omega\in D^i} p(\omega)$ *or* $\int_{D^i} p(\omega)d\omega$.

I study perfect Bayesian equilibria (PBE) in which strategies are sequentially rational and beliefs are determined by Bayes' rule wherever possible. As is typical in signaling models, there are multiple equilibria, some of which are unintuitive. To deal with these, two additional conditions are imposed that together guarantee sincere legislator behavior. From now on, these constraints are implicitly added to the equilibrium definition, made explicit in the supporting information (SI Appendix A.1). First, in every state ω, intermediaries give sincere endorsements, which means that they recommend that the proposal passes if and only if they obtain a non-negative payoff of $v_i(\omega) \geq 0$. Second, legislators vote sincerely given their beliefs and approve the proposal if they are indifferent.

The Value of Intermediaries

The main contributions of this article are clarified in several examples that illustrate (a) how persuasion works without intermediaries and (b) how intermediaries potentially allow an interest group to get the proposal to pass with higher probability from an *ex ante* perspective. The examples highlight the three strategies described in the introduction, where the report is sent to no one, everyone, or only some legislators. The first example illustrates the first two strategies, whereas the other ones show different ways in which intermediaries can help the proposal pass with higher probability.

To fix ideas, consider a proposal for a new highway and an interest group that is always in favor of this proposal. Legislators, however, may to varying degrees care about the environmental and financial consequences of the proposed highway, which may have uncertain impacts on pollution (ω_1) and the profits of businesses (ω_2). Higher values of ω_1 mean that pollution is less of a problem, whereas higher values of ω_2 mean that the highway leads to higher business profits. The goal of the group is to strategically provide information about the environmental and financial consequences such that the highway is built with the highest probability from an *ex ante* perspective. In every example, due to the linearity assumption on payoffs, expected payoffs of implementing a proposal given a signal s' are

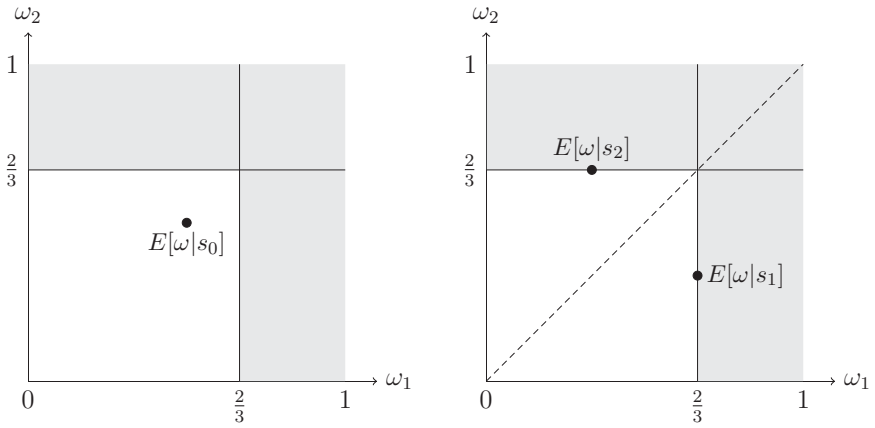
$$V_i(s') = \alpha_i E[\omega_1|s'] + \beta_i E[\omega_2|s'] + C, \tag{2}$$

where $E[\cdot]$ denotes the expectation operator. Due to equilibrium assumptions, legislator i accepts the proposal if and only if $V_i(s')$ is non-negative.

Before demonstrating how intermediaries can help interest groups, the first example illustrates lobbying without intermediaries. It serves as a benchmark to illustrate when and how intermediaries help a group to increase its influence over a legislature. It shows also how there are multiple equilibria. In one equilibrium, the proposal passes in every state while no report is ever sent. In another, the report is sent to every legislator, and the proposal passes as long as the required majority prefers the proposal after reading the report. Figure 1 accompanies the example.

Example 1 (Lobbying without Intermediaries). *There are two legislators, where at least one legislator has to approve the highway proposal for it to pass. Legislator 1 cares only about the environment and earns a payoff of* $v_1(\omega_1) = \omega_1 - \frac{2}{3}$, *whereas legislator 2 cares only about the financial dimension and earns a payoff of* $v_2(\omega_2) = \omega_2 - \frac{2}{3}$. *Thus, each legislator* $i = 1, 2$ *only approves the proposal if*

FIGURE 1 Cheap Talk and Full Disclosure (Example 1)



Note: The left panel shows the expected state under the prior, and the gray area illustrates in which states the proposal has a majority. With full disclosure, the proposal passes in the shaded region only. The right panel illustrates the use of cheap talk, where m_1 and m_2 are sent below and above the 45-degree dashed line. This strategy generates posteriors $E[\omega|s_1]$ and $E[\omega|s_2]$ (both in the gray area); thus, the proposal passes after every signal.

$E[\omega_i] \geq \frac{2}{3}$. *Notice that at the prior, the expected state is* $E[\omega|p] = (\frac{1}{2}, \frac{1}{2})$. *Suppose the group sends the same signal* $s_0 = (m_0, 0)$ *in every state. Then neither legislator approves the proposal and it does not pass because* $V_i(s_0) = \frac{1}{2} < \frac{2}{3}$ *for* $i = 1, 2$. *Instead, first consider the use of cheap talk without a report. The group can use the following strategy, where it sends* $s_1 = (m_1, 0)$ *if* $\omega_1 \geq \omega_2$ *and* $s_2 = (m_2, 0)$ *otherwise. Following* s_1, *legislators have a belief that is uniform over all the states such that* $\omega_1 \geq \omega_2$ *and the expected state is* $E[\omega|s_1] = (\frac{2}{3}, \frac{1}{3})$. *Following* s_2, *their belief is uniform over all states such that* $\omega_1 < \omega_2$ *and the expected state is* $E[\omega|s_2] = (\frac{1}{3}, \frac{2}{3})$. *Following* s_1, *1 approves the proposal because* $V_1(s_1) = E[\omega_1|s_1] \geq \frac{2}{3}$ *and 2 approves following* s_2 *because* $V_2(s_2) = E[\omega_2|s_2] \geq \frac{2}{3}$. *The proposal thus passes in every state. Second, consider full disclosure, where the group provides verifiable information to both legislators in every state. As 1 approves the proposal if* $\omega_1 \geq \frac{2}{3}$ *and 2 if* $\omega_2 \geq \frac{2}{3}$, *the proposal passes if and only if* $\omega_1 \geq \frac{2}{3}$ *or* $\omega_2 \geq \frac{2}{3}$. □

The first example illustrates two initial results. First, the group can guarantee that the proposal passes if at least k legislators are in favor through full disclosure. Graphically, this means that the proposal passes if and only if the state is in the shaded area in Figure 1. Second, under certain conditions, the interest group can choose to not rely on reporting, and only send cheap talk messages, as Example 1 shows is sometimes possible. If cheap talk is not influential in equilibrium, however, this does not imply that full disclosure is the only alternative.

The remaining analysis focuses on how intermediaries can help the group improve upon full disclosure. The following is a simple example of the benefit of intermediaries. The reason for the benefit is that a nonintermediary approves the proposal in some states where she would not have approved it if she had received the report herself. But the intermediary's endorsement contains sufficiently positive news that warrants approval under incomplete information about the state.

Example 2 (Lobbying with an Intermediary). *Two legislators unanimously decide whether a highway is built. If it is built, legislator 1 earns a payoff of* $v_1(\omega) = \omega_1 + \omega_2 - 1$ *and legislator 2 earns a payoff of* $v_2(\omega) = \omega_1 + \omega_2 - \frac{4}{3}$. *Notice that with full disclosure, the proposal passes if and only if* $\omega_1 + \omega_2 \geq \frac{4}{3}$ *because otherwise legislator 2 does not approve the proposal. Consider the following alternative disclosure strategy. If* $\omega_1 + \omega_2 \geq 1$, *then the interest group sends signal* $s_1 = (m_0, 1)$, *which means that it only provides a report to 1, and otherwise the group does not provide a report. Upon observing a report that proves that the state is* $\omega_1 + \omega_2 \geq 1$, *1 endorses the proposal, but not otherwise. Of course, 1 approves the proposal after observing that* $\omega_1 + \omega_2 \geq 1$. *But 2's approval is also necessary to ensure that the highway is built. After observing that 1 received a report and endorsed the proposal, 2 knows that the state is uniformly distributed over the states such that* $\omega_1 + \omega_2 \geq 1$. *As a result, the expected state conditional on a report to 1 and 1's endorsement is* $E[\omega|s_1, e_1 = 1] = (\frac{2}{3}, \frac{2}{3})$. *This means that legislator 2 also prefers the proposal (because* $V_2(s_1) = E[\omega_1] + E[\omega_2] - \frac{4}{3} \geq 0$*), and the highway is*

built. The group improves upon full disclosure because the proposal passes if and only if $\omega_1 + \omega_2 \geq 1$*, whereas with full disclosure, the proposal passes if and only if* $\omega_1 + \omega_2 \geq \frac{4}{3}$. □

Example 2 illustrates how intermediaries can help interest groups get proposals to pass with higher probability compared to full disclosure and in cases where cheap talk could not be influential. The reason is that, after learning that an intermediary endorses the proposal, this provides positive information about ω_1 and/or ω_2 compared to her prior belief. How positive this information is depends on the payoffs of the intermediary and, in particular, under which states the intermediary prefers the proposal. This also means that not just any intermediary is able to persuade others. An intermediary's endorsement has to convey sufficiently positive news for it to persuade other legislators to vote in favor.[6]

Besides this issue, there is another important factor that determines whether an intermediary can help persuade other legislators: Legislators may care differently about the two dimensions (ω_1 and ω_2). For example, when $\alpha_i > \alpha_j$ and $\beta_i < \beta_j$, then legislators i and j put different weights on the two dimensions in their payoffs. This has implications for the selection of intermediaries. The following example shows how using a single intermediary does not suffice because it only provides positive information about one dimension (either ω_1 or ω_2). This is not sufficient if a legislator who needs to be persuaded requires positive information about both dimensions ω_1 *and* ω_2. The example shows that a possible solution is to provide a report to two legislators, where each legislator's endorsement provides positive information about a separate dimension. In reference to the highway example, this means that using a green intermediary can be informative about how much pollution the highway will generate, whereas using a more right-wing intermediary is informative about the effects on business profits.

Example 3 (Lobbying with Multiple Intermediaries). *Three legislators unanimously determine whether a proposal should pass. Payoffs are* $v_1(\omega) = \omega_1 - \frac{2}{3}$, $v_2(\omega) = \omega_2 - \frac{2}{3}$, *and* $v_3(\omega) = \omega_1 + \omega_2 - \frac{5}{3}$. *First, with full disclosure, the proposal passes if and only if* $\omega_1 + \omega_2 \geq \frac{5}{3}$, *the shaded region in Figure 2. Second, suppose that the group provides a report to 1 if and only if* $\omega_1 \geq \frac{2}{3}$, *that is,* $s_1 = (m_0, 1)$. *Then 1 endorses the proposal if and only if he observes* $\omega_1 \geq \frac{2}{3}$. *If 3 observes that a report was sent to 1 and 1 endorses the proposal, then the expected state is* $E[\omega|s_1] = (\frac{5}{6}, \frac{1}{2})$, *which implies 3 rejects and the proposal fails to pass. The reason is that providing a report to 1 only provides positive information about the first dimension but not the second. A similar conclusion holds if a report is only sent to legislator 2. Alternatively, suppose the interest group sends signal* $s_{12} = (m_0, \{1, 2\})$, *a report to both 1 and 2, if and only if both* $\omega_1 \geq \frac{2}{3}$ *and* $\omega_2 \geq \frac{2}{3}$. *In these states, both 1 and 2 endorse the proposal. Given this, 3 learns that* $E[\omega|s_{12}] = (\frac{5}{6}, \frac{5}{6})$, *and 3 approves the proposal because* $E[\omega_1|s_{12}] + E[\omega_2|s_{12}] - \frac{5}{3} \geq 0$. *Due to multiple endorsements, the proposal also passes in the dotted region (Figure 2).* □

The previous example shows how it can be beneficial to send a report to more than one legislator in the same state. The next example is similar as multiple intermediaries are used, but they are not used simultaneously. Depending on the group's information, it focuses its attention on a particular intermediary. For example, if it turns out the highway is relatively good for the environment, it provides a report to one legislator, whereas if the highway is relatively good for business, it provides a report to another.

Example 4 (Randomizing over Intermediaries). *Two legislators unanimously decide whether to pass a proposal with payoffs* $v_1(\omega) = \omega_1 + \frac{1}{2}\omega_2 - 1$ *and* $v_2(\omega) = \frac{1}{2}\omega_1 + \omega_2 - 1$. *Consider the following signaling strategy as a function of the state.*

$$\begin{aligned} s(\omega) = s_1 &:= (m_0, 1) \text{ if } \omega_1 + \tfrac{1}{2}\omega_2 - 1 \geq 0 \text{ and } \omega_1 \geq \omega_2; \\ s_2 &:= (m_0, 2) \text{ if } \tfrac{1}{2}\omega_1 + \omega_2 - 1 \geq 0 \text{ and } \omega_1 < \omega_2; \\ s_0 &:= (m_0, 0) \qquad \text{otherwise.} \end{aligned} \tag{3}$$

This means that 1 endorses the proposal after s_1, *and 2 after* s_2. *Given this strategy, legislators who did not obtain a report have the following beliefs:*

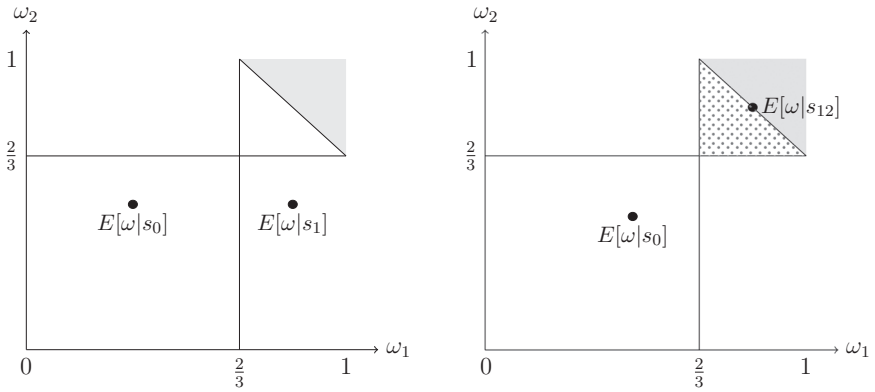
$$E[\omega|s_1] = \left(\frac{8}{9}, \frac{5}{9}\right),\ E[\omega|s_2] = \left(\frac{5}{9}, \frac{8}{9}\right),$$
$$E[\omega|s_0] = \left(\frac{7}{18}, \frac{7}{18}\right). \tag{4}$$

Thus, 2 approves the proposal after he learns that 1 received a report and endorsed the proposal because $V_2(s_1) = \frac{1}{2}E[\omega_1|s_1] + E[\omega_2|s_1] - 1 = \frac{1}{2}\frac{8}{9} + \frac{5}{9} - 1 \geq 0$. *A symmetric conclusion follows after* s_2, *after which 1 approves the proposal. Naturally, the proposal does not pass after* s_0. *As a result, the proposal passes if* $v_1(\omega) \geq 0$ *or* $v_2(\omega) \geq 0$, *instead of if both inequalities hold, and the group benefits from randomizing over intermediaries.* □

The above examples show how an interest group can be better off by selectively providing reports to certain legislators. In every example with intermediaries, cheap talk was not necessary in equilibrium. The group simply provided a report to certain legislators (recall G) but did not rely on sending different messages as a function of

[6] An extension with costly access below clarifies this point.

FIGURE 2 Lobbying with Multiple Intermediaries (Example 3)



Note: The left panel illustrates a strategy profile where the group sends $s_1 = (m_0, 1)$ if $\omega_1 \geq \frac{2}{3}$ and $s_0 = (m_0, 0)$ otherwise. As $E[\omega|s_1]$ is not in the shaded area, the proposal does not pass after s_1. The right panel illustrates an alternative strategy profile where 1 and 2 receive a report in the dotted and shaded regions. As $E[\omega|s_{12}]$ falls in the shaded regions, the proposal passes after s_{12}. The dotted region is the benefit due to intermediaries.

the state (recall the m-part of the signal s). The following example, however, shows that the group needs to combine the private provision of verifiable reports with public cheap talk. In doing so, the group can provide information that selectively targets certain legislators. That is, the intermediary provides positive information about the environmental and financial dimension, but cheap talk provides even more information about the individual dimensions. These messages persuade different majorities as in the first example, but cheap talk would not be influential by itself. Figure 3 accompanies the below example and illustrates this logic graphically.

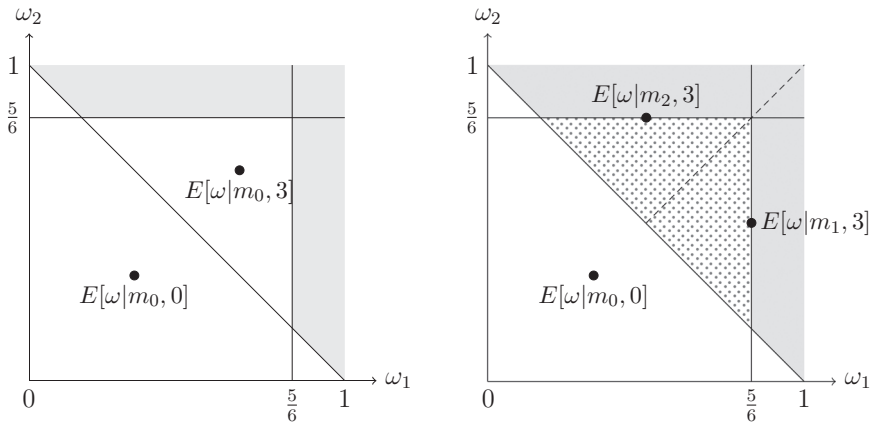
Example 5 (Combining Intermediaries and Cheap Talk). *There are three legislators and simple majority rule. Payoffs are as follows:* $v_1(\omega) = \omega_1 - \frac{5}{6}$, $v_2(\omega) = \omega_2 - \frac{5}{6}$, *and* $v_3(\omega) = \omega_1 + \omega_2 - 1$. *Suppose the group uses 3 as an intermediary and provides a report to 3 if and only if* $\omega_1 + \omega_2 \geq 1$ *without cheap talk, and no report otherwise. After this report, 3 endorses the proposal. Legislators 1 and 2 then believe it is uniformly distributed over states such that* $\omega_1 + \omega_2 \geq 1$ *and the expected state is* $E[\omega] = (\frac{2}{3}, \frac{2}{3})$. *Neither 1 nor 2 approves the proposal because* $E[\omega_1] = E[\omega_2] < \frac{5}{6}$, *which is too low for either legislator to warrant approval.*

Alternatively, suppose that a report is sent to 3 if $\omega_1 + \omega_2 \geq 1$, *but that message* m_1 *is sent if* $\omega_1 \geq \omega_2$ *and message* m_2 *if* $\omega_1 < \omega_2$. *In that case, 1 and 2 learn that* $E[\omega] = (\frac{5}{6}, \frac{1}{2})$ *following a report to 3 and message* m_1 *and learn that* $E[\omega] = (\frac{1}{2}, \frac{5}{6})$ *following a report to 3 and message* m_2. *As a result, following* $s_1 = (m_1, 3)$, *1 approves because* $E[\omega_1]$ *is at least as great as* $\frac{5}{6}$; *following* $s_2 = (m_2, 3)$, *2 approves because* $E[\omega_2]$ *is at least as great as* $\frac{5}{6}$. *Again, the proposal passes in the dotted and gray area, instead of only in the gray area. An intermediary can help improve upon full disclosure, but the interest group requires public cheap talk to do so.* □

To summarize, several examples illustrate how interest groups strategically use intermediaries and may benefit from doing so. The first example shows how full disclosure is a lower bound of group influence and that if cheap talk is influential, it provides an upper bound of influence. The remaining examples all show how even if cheap talk is not influential, the group may improve its *ex ante* payoff over full disclosure by carefully selecting certain intermediaries. In doing so, legislators who are harder to persuade approve under uncertainty. After learning that certain intermediaries endorse the proposal, other legislators are not completely certain that approving is the right decision, but still find it beneficial to do so. In Examples 2–5, other legislators approve the proposal in states even though they would not do so if they had received the report themselves in those states. However, other legislators are only willing to follow intermediary endorsements as long as they contain sufficiently positive information about ω_1 and ω_2. The examples highlight several ways in which groups select intermediaries. Namely, they may target multiple intermediaries to provide positive information about multiple dimensions, use different intermediaries as a function of its report, and combine a report and public cheap talk.

It remains an open question, however, to what extent these examples generalize. The following section provides further analysis in environments where fewer restrictions are placed on preferences.

FIGURE 3 Combining an Intermediary and Cheap Talk (Example 5)



Note: The left panel illustrates a strategy profile in which a report is sent to 3 without cheap talk. As $E[\omega|m_0, 3]$ does not fall in the gray region, the proposal does not pass after a report to 3. The right panel illustrates an alternative profile. In the nonwhite region, m_1 is sent below the dashed line and m_2 above it. This generates $E[\omega|m_1, 3]$ and $E[\omega|m_2, 3]$, which are both in the gray region, and the proposal passes then.

Lobbying in General Environments

In analyzing less restrictive environments, I change two parts in the original model. First, instead of a two-dimensional state of the world, the state is now drawn from a finite set Ω. Every legislator has a common prior $p = \langle p(\omega_1), \ldots, p(\omega_k)\rangle$, which is a vector over the $k \geq 2$ states. Second, for analytical convenience, I impose the restriction that $v_i(\omega) \neq 0$ for all legislators i and all states $\omega \in \Omega$. This means that, given complete information about the state ω, no legislator is ever indifferent between the status quo and proposal.

As outlined in the introduction, there are different strategies to persuade the legislature. The interest group can directly persuade legislators either by sending a report to everyone or through public cheap talk without a report. Otherwise, the interest group can selectively send a report to intermediaries while leaving others in the dark. Although the use of intermediaries is the main novelty, it helps to first analyze direct persuasion to understand when and why intermediaries help interest groups.

Full Disclosure and Cheap Talk

At the voting stage, intermediaries accept the proposal based on the state ω, whereas other legislators base their decision on a common posterior belief $q := \langle q(\omega)\rangle_{\omega\in\Omega}$, which is a probability distribution over all the states $\omega \in \Omega$ and follows from Bayes' rule. Given that at least k legislators need to accept the proposal, we need

$$\overbrace{|\{j \in G : v_j(\omega) \geq 0\}|}^{\text{intermediaries who agree}} + \overbrace{|\{i \notin G : \sum_{\omega'} q(\omega')v_i(\omega') \geq 0\}|}^{\text{others who agree}} \geq k \qquad (5)$$

for the proposal to pass. This immediately implies that the proposal passes if at least k legislators prefer the proposal given complete information about the state.[7] This provides a lower bound on the interest group's welfare. The reason is that if the proposal fails to pass while k legislators would prefer the proposal under full information, the group can deviate and provide a report to every legislator who prefers the proposal and ensure approval.

Lemma 1. *In every equilibrium, the proposal passes in every state in which at least k legislators prefer it. The interest group's ex ante payoff cannot be lower than its payoff in the equilibrium in which the interest group discloses its report to every legislator in every state.*

Hence, there is at least one equilibrium in which the interest group reveals a report to every legislator in every state. As the examples show, however, the group may sometimes do better than this. One possibility is that, as in the first example, the group does not rely on a report to persuade legislators. Under what conditions does an

[7] That is, for all $\omega' \in D_k := \{\omega : |\{i : v_i(\omega) \geq 0\}| \geq k\}$, $x^*(\omega') = 1$ in every equilibrium.

equilibrium with only cheap talk exist? Instead of studying every possible interest group strategy, it is easier to study the properties of posterior beliefs that result from the group's strategy. That is, in equilibrium, the group's strategy leads to (or *induces*) beliefs of legislators that determine whether the proposal passes. The relevant set is the *win-set* W_k,[8] which contains all beliefs under which at least k legislators prefer the proposal. If only cheap talk is used in equilibrium, this set is immediately useful because every legislator has the same belief q. Then if $q \in W_k$, the proposal passes, whereas it does not pass if $q \notin W_k$. A posterior belief q is a function of which signal and endorsements were chosen beforehand. Summarizing every path of play, there is a set of beliefs $\langle q \rangle$, where every posterior $q \in \langle q \rangle$ is induced with positive probability. For example, with three states, a belief following one path of play may be $q^1 = ({}^1/_2, {}^1/_2, 0)$, whereas a belief following another path may be $q^2 = (0, 0, 1)$.

The equilibrium analysis can to a large extent be condensed into an analysis of these beliefs. It is useful to think of the interest group as a player who controls these beliefs under constraints. One constraint comes from the laws of probability: *Bayes' plausibility* says that posterior beliefs, weighed by the probability with which they are induced, need to average back to the prior.[9] Geometrically, this means that the prior must be expressed as a convex combination of all induced posteriors, that is, $p \in co(\langle q \rangle)$, where $co(\cdot)$ is the convex hull of a set.

Depending on the win-set W_k and the prior p, cheap talk can be influential (Schnakenberg 2017). A trivial case is when $p \in W_k$, as that means that without information transmission, at least k legislators would approve the proposal. However, there are also cases in which $p \notin W_k$, but the group can still persuasively use cheap talk by exploiting disagreement among legislators who care differently about dimensions, as in Example 1. This condition is that the prior $p \in co(W_k)$ must be in the convex hull of the win-set. The group can induce beliefs such that the proposal passes after every belief only given that geometric condition.

Lemma 2. *There exists an equilibrium in which the proposal passes in every state but no report is ever sent by the interest group, if and only if* $p \in co(W_k)$.

[8]This set equals $W_k := \{q \in \Delta\Omega : |\{i : \sum_{\omega'} q(\omega')v_i(\omega') \geq 0\}| \geq k\}$.

[9]If $\tau[q] > 0$ is the probability that q is induced (with $\sum \tau[q] = 1$ for all $q \in \langle q \rangle$), then the weighted sum of posteriors equals the prior, that is, $\sum \tau[q]q = p$.

Persuasion with Intermediaries

There are, however, also parameters under which a report is necessary to persuade legislators to pass the proposal. The focus from now on lies on prior beliefs $p \notin co(W_k)$ in which cheap talk without a report cannot be influential. To be more specific, if the interest group could only communicate through public cheap talk, then influence is impossible. The reason is that due to Bayes' plausibility, there has to be at least one belief $q' \in \langle q \rangle$ such that $q' \notin W_k$. Given this, if only cheap talk messages were to be sent, the group is sometimes supposed to send messages that lead to the status quo. But because the group always prefers the proposal to pass, there is no incentive to send any message that leads to posterior $q' \notin W_k$. Instead, the presence of verifiable information enables the group to influence policies when cheap talk on its own would fail.

For the sake of exposition, I introduce conditions on the group's strategy. Specifically, on the path of play and given a state, the group only provides a report if the proposal passes afterward. Also, a report is only sent to legislators who prefer the proposal to pass given the state. This joint condition allows for sharper statements about the selection of intermediaries because intermediaries are only used if they help in persuading the legislature.

Definition 2 (Minimal Reporting Condition). *In an equilibrium in which the minimal reporting condition is satisfied, if—on the path of play—the interest group provides a report to a group of intermediaries, then (i) the proposal passes and (ii) every intermediary prefers the proposal to pass.*

Under this condition, after observing that some group of intermediaries (G) received a report and that every member of G has endorsed the proposal, those who did not get a report know that these intermediaries jointly prefer the proposal. Define $D^G := \cap_{i \in G} D^i$ as the set of states for which every member of G prefers the proposal. Then, on the path of play, if the proposal passes after providing a report to G, the associated posterior belief must both be in the win-set (W_k) and in ΔD^G, which is the set of distributions that only put positive probability on states in D^G. The idea is that intermediaries provide support to the beliefs that the interest group wishes to induce. The fact that their endorsements are necessary for influential persuasion means that the interest group cannot profitably deviate in states that are not acceptable to some group of intermediaries. In other words, the interest group's lie is detectable by legislators because intermediaries are not giving the expected endorsement(s).

The minimal reporting condition also requires that, on the path of play, whenever a report is sent, the proposal passes. Generally, the interest group may provide a report to different groups of intermediaries instead of always to the same group of intermediaries G. For example, if there are two legislators, the interest group may choose to sometimes provide a report to legislator 1 with $G = \{1\}$, and sometimes to legislator 2 with $G = \{2\}$, as in Example 4, where the group randomized over intermediaries. More generally, these groups of intermediaries (G^1, G^2, and so forth) can be summarized by a super-set of intermediary groups called $\mathcal{G}$, which contains all groups G' that receive a report with positive probability. In the above example, this means that $\mathcal{G} = \{\{1\}, \{2\}\}$. By the minimal reporting condition, the set of states in which the proposal passes then equals $D^{\mathcal{G}} := \cup_{G\in\mathcal{G}} D^G$. These are all the states in which at least one group of intermediaries $G \in \mathcal{G}$ collectively prefers the proposal.

However, the interest group cannot select any arbitrary set of groups of intermediaries ($\mathcal{G}$). First, by Lemma 1, the proposal passes if the legislature prefers it under full information, which implies that $D_k \subseteq D^{\mathcal{G}}$. The second condition is the main technical contribution of this article. It is a geometric condition that takes the preferences of the intermediaries that are lobbied in equilibrium (recall $\mathcal{G}$) as an input and checks whether their endorsements are able to persuade a k-majority of legislators. Lemma 2 implies that the proposal does not pass in states outside $D^{\mathcal{G}}$, in which no targeted group of intermediaries $G \in \mathcal{G}$ jointly prefers the proposal to pass. This is because the proposal cannot pass with probability 1. The minimal reporting condition and incentive compatibility then imply that the proposal passes in every state in $D^{\mathcal{G}}$. The reason is that the group can always send a signal $s = (m, G)$, with $G \in \mathcal{G}$, and induce a belief that leads to implementation of the proposal, as long as $\omega \in D^{\mathcal{G}}$. This is because there is always one group of intermediaries $G \in \mathcal{G}$ that jointly prefers the proposal under full information. The final step is then to apply Bayes' plausibility, which requires that induced beliefs average back to the prior. It also implies that all the beliefs after which the proposal passes must average back to the distribution over states that is conditional on $\omega \in D^{\mathcal{G}}$. That is, there is a conditional distribution on the state ω being one of the states in which the proposal passes ($D^{\mathcal{G}}$) defined as $r(D^{\mathcal{G}})$.[10]

Given that the proposal needs to pass in every state in which one lobbied group of intermediaries jointly prefers the proposal ($\omega \in D^{\mathcal{G}}$), beliefs following reports to these groups have to satisfy two main conditions. As mentioned before, they must lead to majority approval so that each of these beliefs falls in the win-set. Additionally, each belief must only put positive probability on states in which a given group of intermediaries $G \in \mathcal{G}$ jointly prefers the proposal to pass; that is, the belief has to fall in ΔD^G. Together, this is captured by the main geometric condition, defined below.

Definition 3 (Main Geometric Condition). *In an equilibrium in which intermediary-set $\mathcal{G}$ is selected, the main geometric condition is satisfied if $r(D^{\mathcal{G}}) \in co(W_k \cap (\cup_{G\in\mathcal{G}} \Delta D^G))$.*

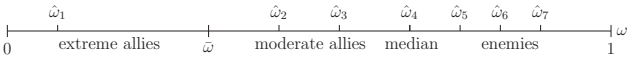
Proposition 1. *Assume that cheap talk is not influential. An equilibrium with minimal reporting and intermediary-set $\mathcal{G}$ exists if and only if (a) the interest group does not do worse than full disclosure ($D_k \subseteq D^{\mathcal{G}}$) and (b) the main geometric condition is satisfied.*

How does the equilibrium work? On the path of play, the interest group sends a report to a group of intermediaries. These intermediaries all read the report, learn the state, and tell their colleagues that the proposal should pass. Other legislators observe this, and they learn a sufficient amount of information such that the required majority votes in favor. Thus, the proposal passes. Why do these intermediaries not deviate and say something else? Because they are *ex post allies*, they benefit from the proposal and have no reason to behave differently. Similarly, why does the interest group not deviate? It only has a reason to do so if it does not get what it wants. There are some states in which the proposal does not pass because a report is not provided to some group of intermediaries $G \notin \mathcal{G}$. Suppose, however, that the interest group deviates and does send a report to one of these groups? Then at least one member of this intermediary group is not an *ex post* ally and does not endorse the proposal. This means that no majority updates its belief sufficiently favorably and implies that the interest group cannot benefit from deviating. Similarly, if S selects a group $G \notin \mathcal{G}$, then this is off-path and Bayes' rule does not apply. Thus, beliefs can be chosen freely such that the proposal does not pass after this deviation.

The supporting information expands on the main proposition and illustrates how the main geometric condition is applied to several simple examples with small state-spaces and small legislatures, with accompanying figures (SI Appendix E). The remainder of the article

[10] Let the conditional probability of the state being in a non-empty set $\Omega' \subseteq \Omega$ be $r(\omega|\omega \in \Omega') = \frac{p(\omega)}{\sum_{\omega'\in\Omega'} p(\omega')}$ if $\omega \in \Omega'$ (0 otherwise) and $r(\Omega') = \langle r(\omega|\omega \in \Omega')_{\omega\in\Omega}\rangle$ be the conditional distribution.

FIGURE 4 Legislator Categories and Buying Access



Note: In a seven-person legislature, 1 is an extreme ally, 2 and 3 are moderate allies, 4 is the median, and the others are enemies. Proposition 2 predicts that S buys access to 3.

studies extensions of the main model in one-dimensional environments.

Costly Access and Optimal Intermediaries

I now extend the model so that S buys access before observing the state. To facilitate exposition, the setup is simplified. The state ω is distributed uniformly on the [0,1] interval. An odd number of legislators $n \geq 3$ can collectively pass the proposal if and only if a majority of at least $k = \frac{n+1}{2}$ legislators is in favor. Each legislator i has an indifferent point $\hat{\omega}_i \in (0, 1)$ that determines payoffs as follows. If the proposal does not pass ($x = 0$), then i earns a payoff of 0. If it does ($x = 1$), then i earns a payoff of 1 if $\omega \geq \hat{\omega}_i$, and a payoff of -1 otherwise. If S buys access to intermediary group $G^A \subseteq N$, it pays a cost of access $c > 0$ per legislator. Its utility is $u_S(x, G^A) = x - |G^A|c$.

Besides the median with indifference point $\hat{\omega}_k > \frac{1}{2}$, there are three categories of legislators (Figure 4): (a) *enemies*, who are further removed from the interest group than the median ($\hat{\omega}_i > \hat{\omega}_k$); (b) *moderate allies*, who are closer than the median but sufficiently close to the median ($\bar{\omega} \leq \hat{\omega}_i < \hat{\omega}_k$); and (c) *extreme allies* ($\hat{\omega}_i < \bar{\omega}$), who are not close enough to the median.

In this setting, there is no need to buy access from more than one legislator because it does not allow the group to prove something that it cannot prove through access to a single legislator. More specifically, S only buys access from the median or moderate allies. How does the use of access to particular legislators affect posterior beliefs? Other legislators know that given an intermediary j's endorsement ($e_j = 1$), the state must be higher than j's indifference point ($\omega \geq \hat{\omega}_j$). The median must prefer the proposal given this information:

$$\Pr(\hat{\omega}_j \leq \omega < \hat{\omega}_k | e_j = 1)[-1] + \Pr(\omega \geq \hat{\omega}_k | e_j = 1)[1] \geq 0 \iff \hat{\omega}_j \geq \bar{\omega} := 2\hat{\omega}_k - 1. \quad (6)$$

The above value $\bar{\omega} \in (0, \hat{\omega}_k)$ divides allies into moderates and extreme ones. Legislators who are too allied to S, with indifference points $\hat{\omega}_j < \bar{\omega}$, are unable to get the median to pass the proposal. The reason is the median believes the probability that his payoff is -1 is too large. Thus, S buys access from legislators who are sufficiently close to the median. In choosing a moderate ally, S prefers to buy access to the most ideologically similar legislator with the lowest indifference point because if an intermediary helps to persuade a majority, the proposal passes if and only if the state is greater than his indifference point. The lower this point, the more often the proposal passes.

Proposition 2. *Assume access is sufficiently cheap and that the proposal does not pass given the prior. If there is a moderate ally, the interest group buys access from the moderate ally that is most allied. Otherwise, the interest group buys access from the median.*

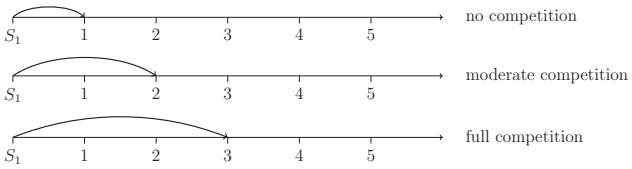
Competition and the Selection of Moderate Intermediaries

To study the selection of intermediaries under competition, consider an alternative extension with two interest groups and free access. The original interest group S is now S_1, and the competing one is S_2. For the sake of exposition, I study a highly streamlined model just to analyze the effect of competition on the selection of intermediaries by S_1. Assume that S_1 observes the state freely, but that S_2 incurs a cost of $\lambda \geq 0$ to observe the state. Denote $o_2 = 1$ if S_2 chooses to observe the state and $o_2 = 0$ otherwise. S_1 prefers the proposal to pass and has a payoff of $u_{S_1}(x) = x$, whereas S_2 prefers the proposal not to pass, with $u_{S_2}(x) = -x - \mathbb{I}_{o_2=1}\lambda$. The focus is on how S_2 and its cost of information acquisition λ affect S_1's selection of intermediaries. Consider the following game where S_2 may acquire and provide information before legislators vote. After Nature draws the state,

1. S_1 observes the state and reveals it to intermediary group $G_1 \subseteq N$,
2. Every intermediary $j \in G_1$ observes the state and endorses (or not),
3. S_2 chooses whether to observe the state and reveal it to intermediary group $G_2 \subseteq N$,
4. Every intermediary $j \in G_2$ observes the state and endorses (or not), and
5. Every legislator observes G_1, G_2, and every endorsement and then votes.

Besides considering majority approval, S_1 also needs to account for S_2. After a report to intermediary group G_1 and its collective endorsement, if S_2 does not acquire information, its expected payoff is -1 because the proposal passes on the path of play. S_2 knows that there are two

FIGURE 5 Competition and Moderate Intermediaries



Note: The median is 3. The arrows reflect who is targeted as a function of λ.

possibilities. Either the state is so high that the proposal would pass regardless ($\omega \geq \hat{\omega}_k$) or the state is such that the intermediary group prefers the proposal, but a majority would not ($\hat{\omega}_j \leq \omega < \hat{\omega}_k$). Thus, acquiring information is only beneficial if the latter event is sufficiently likely to make it worth paying λ. S_1 anticipates S_2's calculation and selects more moderate intermediaries. Figure 5 illustrates the logic of how interest group competition affects the selection of intermediaries.

Proposition 3. *Interest group S_1 targets more moderately allied legislators if information acquisition λ is cheaper for the competing interest group S_2. If information acquisition for S_2 is free ($\lambda = 0$), S_1 targets the median.*

Other Extensions

The supporting information contains several other extensions. First, if the interest group's payoff depends on the state, then the legislature can also learn something from the interest group's approval of the proposal (SI Appendix D.1). This may make it easier for the interest group to directly persuade the legislature through cheap talk if preferences are more aligned and may reduce the need for intermediaries. Second, in the main model, the interest group could either choose to reveal the state or not. If information is instead partially verifiable (Mathis 2008), then this removes the need for intermediaries because the interest group has more freedom in manipulating beliefs (SI Appendix D.2). Third, I also study a different form of information transmission in the form of costly signaling (SI Appendix D.3–4). This model may apply when interest groups incur costs to go out of their way to meet legislators. The main takeaways are that groups may combine cheap talk and costly signaling similar to Example 5, where cheap talk and disclosure were combined. Additionally, similar to competitive disclosure, competitive costly signaling may also generate fully informed policymaking, but this is not guaranteed in multidimensional settings.

Discussion

The importance of intermediaries goes back to an earlier literature in American politics (Baumgartner et al. 2009; Mahoney and Baumgartner 2014). Porter (1974) provides a theory of a two-step flow of communication where outsiders use legislative experts to lobby. The mechanism relies on three parts: (a) groups selectively provide information to particular legislators, (b) intermediaries actively convince others, and (c) other legislators listen to their peers.[11] Interviews with lobbyists and members of the 1970 Michigan House in Porter (1974) illustrate how information is provided to allied intermediaries. The epigraph suggests that interest groups strategically target friendly legislators because they can help do "missionary work" to persuade peers who distrust interest groups. Another quote illustrates part (b) of the above mechanism, which says that chosen legislators take an active *informational* role as intermediaries. This was modeled by intermediary endorsements. As one legislator says:

> Sure, I pass along information (one agreed). They're [lobbyists] knowledgeable. They present their viewpoints to me and when I am asked, I tell others. I will give another legislator statistics or other information as well. (Porter 1974, 714)

Part (c), that legislators listen to each other, also comes up in interviews with legislators. Some are better informed than others, and the latter listen to expert legislators, as long as preferences are sufficiently aligned:

> I rely on other legislators although I don't cross party lines very often because of differences of philosophy. (Porter 1974, 710)

Further, the focus on allies as intermediaries is also prescribed by "how-to-lobby" manuals. These manuals suggest that people should lobby friendly legislators, and one reason is that they can help persuade their peers.

> If the elected official was a "Yes" or longtime supporter of your issue, work to cultivate him/her as a champion. [...] They can assume a leadership role in influencing other legislators. (Center for Health and Gender Equity n.d.).

[11]The intermediary mechanism proposed in this article is not unique. For example, Ainsworth (1997, 520) notes that undecided legislators find it harder to ignore legislators than lobbyists, even if both present the same message. Also, in Bauer, Pool, and Dexter (1963), lobbyists provide information to sympathetic members of Congress who use this to support their *ex ante* policy stance.

Despite the model's prediction that interest groups may use intermediaries under certain circumstances, another prediction is that groups may also lobby without intermediaries. Several instances are indicative of the absence of intermediaries in persuading collective bodies. For example, a leaked document shows how trade unions and civil society organizations targeted members of the European Parliament indiscriminately.[12] Depending on a legislature's ideological composition, groups may skip intermediaries in the lobbying process.

Moreover, the model and formal examples show many possibilities in which intermediaries are used differently. First, intermediaries simply put information in a better light. Upon observing that an allied intermediary (who is sufficiently moderate) endorses a proposal, other legislators are more favorable toward the proposal. Thus, one task of intermediaries is, by verifying information, to simply prove to others that the proposal is better than initially thought. Second, especially in multidimensional settings, multiple intermediaries need to be used to successfully put information in a better light. The reason is that individual intermediaries may provide positive information about distinct dimensions, such as the environmental and financial dimensions in the highway example. Third, groups may want to randomize over the use of different intermediaries depending on what information it has. Fourth, another example illustrates how using intermediaries on its own may not be sufficient to get majority approval. Again, the reason is that in multidimensional settings, different legislators require positive information about distinct dimensions. As a result, a group's use of cheap talk may help polarize legislators to get majority approval where using intermediaries by itself would fail. Thus, groups may simultaneously lobby through private meetings with verifiable information and public cheap talk communication.

Conclusion

I have developed and analyzed a model of persuasive lobbying in legislatures with cheap talk and verifiable information. The results help to improve our understanding of what happens in closed-door meetings between interest groups and politicians. With information that is privately provided, intermediary legislators can actively help persuade others, especially when direct persuasion by an interest group is not feasible. The model can also explain the absence of intermediaries, which happens if interest groups can directly persuade a majority or if intermediaries cannot help to improve upon the full disclosure of information. The model downplays the importance of costly or restricted access to legislators, but instead emphasizes the importance of a legislature's ideological composition. Interest groups like to seek access to allied legislators, as long as they are sufficiently moderate to persuade the needed majority to pass preferred policies. Given the support of ideological allies, legislators who do not initially agree with interest groups may be persuaded.

[12]See Corporate Europe (2014), available at https://corporateeurope.org/sites/default/files/expert_group_letter_to_meps.pdf.

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Supporting Information

Additional supporting information may be found online in the Supporting Information section at the end of the article.

Appendix A: Description of the Main Model
Appendix B: Extension with Costly Access
Appendix C: Extension with Competition
Appendix D: Additional Extensions
Appendix E: Examples with Finite State Spaces