Advocates

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The paper's main contribution is to provide a rationale for advocacy. After observing that many organizations (corporations, judiciary, and the executive and legislative branches of government) use competition among enfranchised advocates of special interests to improve policy making, it argues that advocacy has two major benefits. First, the advocates' rewards closely track their performance whereas nonpartisans' incentives are impaired by their pursuing several conflicting causes at one time. Second, advocacy enhances the integrity of decision making by creating strong incentives to appeal in case of an abusive decision. The paper also analyzes the costs of advocacy in terms of manipulation and garbling of information. It further shows that it may be costly for both the organization and interested parties themselves to let these par-

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ties plead their own causes instead of being represented. The paper concludes with two applications to comparative legal systems and to the organization of Congress and with suggestions for future research.

I. Introduction

In economic models, agents are instructed to achieve the goals of their organizations (corporations, government, etc.). While asymmetric information and contracting problems may enable agents to pursue their own agenda, incentive schemes are designed so as to align their interests with those of the organization as well as is consistent with the informational and contracting constraints.

Yet casual observation suggests that organizations deliberately set goals for their members that differ from the optimization of the organization's welfare (profit, social welfare, etc.). Rather, agents are explicitly asked to defend a specific "cause." The organization is then driven by competition among advocates for specific causes. The archetypal example of this can be found in courts. The defense attorney is expected to stand for the defendant, to the point at which he is not meant to reveal information that would be useful for the jury in reaching a decision but would hurt the defendant's case. Similarly (although to a lesser extent because of the asymmetric social cost of excessively tough and lenient sentences), the prosecutor's job is to be rather tough with the defendant.[1] Social welfare maximization or impartiality is not expected from them. This system of conflict and partiality has prevailed for centuries and is deemed to be an integral piece of a democratic system.

Similar situations abound in government. A first example is provided by the legislature. A representative in a parliament (or in a supranational assembly) is expected to make a case for his constituency, and not for the others. Similarly, multipartism is often a system of advocates with parties representing distinct political constituencies. Second, regulatory hearings are a quasi-judicial process in which authorized intervenors lobby for their own cause and proxy advocates (such as the state attorney general and consumer counsels for consumers) defend the cause of comparatively disorganized

[1] It is interesting to note that a recent (September 1995) Supreme Court decision has reinterpreted the Italian constitution concerning the role of prosecutors. Their role has traditionally been akin to that of judges in that they were considered to be auxiliaries of justice. The new and hotly debated interpretation goes in the direction of more advocacy in prosecution.

groups of citizens.[2] Finally, even in the executive branch, we observe that no ministry's mandate is to maximize social welfare. The ministry of labor is also there to defend wage earners, the ministry of industry to promote industry, the ministry of the environment to protect the environment, and so forth. The prime minister arbitrates in cases of conflict.[3]

Corporations also foster competition among enfranchised advocates. Union-management arbitration procedures are an obvious illustration. Efficient committees and boards of directors are built around a conflict among some members with different objectives, with more neutral members arbitrating on the basis of the cases made. The determination of transfer prices is often based on a conflict between divisions fostered by headquarters. This conflict generates useful information. As a last illustration, it is considered acceptable that directors of plants or heads of divisions compete for budgets or stand for the interests of their employees (or for an academic to make a case for his or her field in a department meeting) within certain rules of the game.

Here we focus on the creation (or tolerance) of advocates by organizations. It is not surprising that interest groups themselves act as advocates. More interesting, a priori unbiased parties are turned endogenously into advocates. For example, a representative by design is made an advocate if she is elected at the district level rather than nationwide through a proportional representation scheme. A prosecutor in an adversarial system is also an advocate by design rather than because of some exogenous vested interest. Similarly, officials in the ministry of finance do not have an exogenous stake in budgetary discipline. Our focus on "endogenous advocates" is not meant to deny the relevance of interest group advocacy, although Section IV*B* will point at some limitations on the use of the latter.

Competition among advocates of specific interests or causes may lead to good policy setting in organizations. We also analyze the costs of the creation of advocates. Our starting point is that the case for alternative policies or causes must be made properly. Information that bears on the pros and cons of those alternatives must be created and clearly exposited. Of course, this is only a necessary condition for good decision making, which must also reflect this information

[2] See McCubbins and Schwartz (1984) and McCubbins, Noll, and Weingast (1987) on the reliance on "special interests" and on the creation of proxy advocates for comparatively disorganized groups. See also Dewatripont and Tirole (1997) for a discussion of these themes.

[3] Note that in the executive branch example, advocates are only "weak advocates" (otherwise, why shouldn't one let farmers choose the minister of agriculture?). We shall have more to say about weak and strong advocates in Sec. IV*B*.

appropriately. Up to Section V, we ignore the second issue by assuming that, somehow, the decision is picked that is optimal for the organization conditional on the information created and diffused. This assumption is natural whenever the interests of the decision maker and of the organization coincide. For example, the decision maker could also be the owner of the firm and be residual claimant for its profit. On the other hand, there may be a substantial "separation of ownership and control," which raises the issue of why the decision maker pursues the goals of the organization. We shall show that advocacy then has an added advantage, as advocates provide a check against deviant decision making.

Thus we first focus on the creation of information for decision making assuming proper decision making. Section II develops the basic model. Section III argues that a single information collector faces conflicting tasks when asked to gather information concerning opposing causes. Consider, for instance, a redistributional issue in which money can be given to A or to B or shared between the two. It is no easy task to structure incentives for an information collector who makes the case for both A and B by searching for grounds to favor one or the other; for, a decision to share money between the two may be motivated either by a complete lack of information or by the discovery of two opposing effects. Now, it would be straightforward to structure incentives if one could give direct incentives based on the information collected, as is assumed in the literature: The information collector would be rewarded more for collecting pieces of evidence favoring both even if they cancel out in decision making than for collecting evidence in favor of one or for collecting no evidence. In contrast, if rewards for information collection are indirect in that they are based only on the final decision, the reward is constrained to be the same when two conflicting pieces of evidence are created and when none is created. The information collector's task is not focused enough if he must make the case for both. We shall see that competition between open advocates of the two causes generates either more information or the same information more cheaply.

Decision-based rewards are pervasive. A lawyer is paid by the plaintiff or hired by future clients as a function of whether the case is won and of the level of damages awarded, but not of the information brought to bear or of the quality of the case made by the lawyer. Similarly, politicians and parties are often rewarded by voters on the basis of which decision was made rather than on the way in which the decision was reached. Representatives are often judged on what they obtained for their constituencies. A minister's tenure is often assessed by how well he fulfilled the mission of his ministry rather

than by the quality of the arguments he gave to defend his cause. Section II will discuss the foundations of decision-based rewards. To be certain (being advocates for our modeling choices), we are here overstating the case for decision-based rewards. Direct rewards for information collection and diffusion also exist, in particular, in the form of career concerns. Some close to the decision-making process will recall not only whether the manager, bureaucrat, or politician succeeded in pushing his point of view but also whether a good case was made. So, in general, we have a mixture of decision- and information-based rewards for information collection. The purpose of this paper is to focus on the consequences of decision-based rewards by ignoring finer information-based rewards.

As we have seen, a benefit of creating advocates is that it generates precious information on the pros and cons of alternative policies. One cost is that advocates have an incentive to retain information that is detrimental to their cause or even to forge information. Note, however, that manipulation of information occurs, albeit in a different way, when a single agent is given a nonpartisan incentive scheme; since effort provision requires him to be rewarded when the status quo is abandoned, he will be reluctant to show conflicting pieces of evidence about causes A and B that make the status quo desirable. Section IV looks at the manipulation of information by advocates and nonpartisans. Section IV*A* gives conditions for the optimality of advocacy and nonpartisanship. It is interesting that it shows that the status quo is more likely to prevail under advocacy than under nonpartisanship.

Section IV*B* points out that the possibility of manipulating information introduces an interesting distinction between "representative advocacy" and "self-advocacy." As described in the basic model, a representative advocate acts on behalf of a constituency and, unlike the constituency, does not directly perceive the benefits of policy choices. In contrast, self-advocates defend their own causes. To be certain, a dispersed or incompetent constituency cannot be a self-advocate and needs to be represented. But sometimes parties can stand for themselves as in the case of a taxpayer confronting the revenue service, a firm lobbying for a federal subsidy, management defending its policy or accounts in front of shareholders, or a researcher stressing the merits of his or her contribution. A natural extension of our model is to allow for the possibility of self-advocacy (when relevant). We cast the trade-off between self-advocacy and representative advocacy as one of the power of the incentive scheme. The costs of self-advocacy are associated with an excessive power of the advocate's incentive scheme. Namely, the self-advocate may forge information and lack credibility. In contrast, a representative

advocate, who has less powerful incentives, may only omit to reveal information detrimental to the client. On the other hand, the benefit of self-advocacy is that it eliminates the incentive problems and rents associated with the use of a representative.

Section V extends the basic model in another relevant direction. We have assumed that the decision is selected that is best for the organizational goals conditional on the available information. This presumes that decision makers have incentives to process the information if needed, enjoy no private benefit from specific decisions (in particular, have no ideological bias), are given "neutral incentives," and are not bribed by the parties. While the issue of the integrity of the decision makers arises whether or not an advocacy system is set up, the choice between nonpartisanship and advocacy has an impact on the level of integrity. We argue that an advocacy system has another advantage in the presence of nonbenevolent arbitrators in that it creates a more reliable appeal mechanism. In an advocacy system, there is always someone to blow the whistle on an abusive decision maker, which is not the case under nonpartisanship.

Section VI applies the insights to shed some light on standard questions in law and political science. Section VI*A* compares trial procedures in common-law and civil-law countries. It recasts the difference between the two legal systems as being partly one between advocacy and nonpartisanship. Section VI*B* analyzes a standard topic in political science, the organization of congressional committees, in terms of our framework. It sheds light on the Shepsle and Gilligan-Krehbiel views on the role of congressional committees. Finally, Section VII lists several promising alleys for research, and Section VIII summarizes the main insights.

II. The Basic Model

A. Description

1. Policies

A *decision maker* (manager, judge, or arbitrator) on behalf of a *principal* (organization, parliament, or society) makes one of three decisions: A, B, and "status quo" (indexed by "zero"). Decisions A and B are to be interpreted as favoring interest groups A and B, respectively, and the status quo is an intermediate or moderate decision. For instance, A and B might be two constituencies (regions or divisions) competing for money. The status quo would then correspond to an equal division, whereas the other two decisions allocate the full budget to one of them. Or, in a court trial, the status quo might be an average sentence or damage, whereas the other two decisions

correspond to a more lenient or tougher verdict.[4] Decisions are identified with outcomes. The model is perfectly symmetric between the two causes.

2. Organizational Goals

Organizational preferences depend on a parameter $\theta \in \{-1, 0, 1\}$, where $\theta = \theta_A + \theta_B$. The parameter θ_A is equal to negative one with probability α and zero with probability $1 - \alpha$. Similarly, the parameter θ_B is equal to one with probability α and zero with probability $1 - \alpha$. The two parameters are independently distributed, and so

$$\theta = \begin{cases} -1 & \text{with probability } \alpha(1 - \alpha) \\ +1 & \text{with probability } \alpha(1 - \alpha) \\ 0 & \text{with probability } 1 - 2\alpha(1 - \alpha). \end{cases}$$

The organization's preferences are single-peaked. *Under full information,* the organization would choose decision A for $\theta = -1$, decision B for $\theta = +1$, and the status quo for $\theta = 0$.[5] So, $\theta_A = -1$ and $\theta_B = +1$ are to be interpreted as pieces of information favorable to causes A and B, respectively. The status quo obtains when either there is no case for either cause or there is information favorable to both causes.[6]

3. Information Collection

To learn its preferences the organization must use agents to collect information about θ_A and θ_B. To collect information relative to cause i (i = A, B), an agent must incur unverifiable disutility of effort K. If he does not incur K, the agent learns nothing (which we shall denote by ϕ). If he incurs K and $\theta_i = 0$, the agent learns nothing. If he incurs K and $|\theta_i| = 1$, the agent learns nothing with probability $1 - q$ and obtains with probability q hard, positive evidence P_i that $|\theta_i| = 1$.

[4] The status quo should thus not necessarily be interpreted as "immobilism." Rather, the status quo stands quite generally for a moderate outcome, even when this outcome results from, but does not coincide with, a prior decision. For example, when a legislature adjusts the minimum wage, the zero point is the decision that would be made solely on the basis of prior information. Decisions A and B would be either a larger or a smaller increase.

[5] For example, the organization has preferences $-k(\theta)(y - \theta)^2$, where $y = -1$ for decision A, $= 0$ for the status quo, and $= +1$ for decision B and $k(\theta)$ is a positive θ-dependent constant.

[6] The assumption that both pieces of information exactly cancel out is only a simplifying assumption, as a model with a continuum of decisions would confirm.

As a first step, we assume that the evidence is *nonmanipulable*. That is, once created, the hard evidence cannot be concealed and automatically becomes the property of the organization and is used for decision making. (Alternatively, there is some probability that information concealment is detected and severely punished. Later, we shall introduce two related concepts of manipulability, in which the agent is able to hide the hard information [concealable information] or to forge information [forgeable information], and we shall ask whether the manipulation of information should be punished if it is detectable.)

We assume that each cause is investigated by one agent. That is, the duplication of information collection is very costly.[7] The key organizational issues will be whether the same agent investigates the two causes, or whether tasks are allocated to two distinct agents, and the form of incentives these agents receive. For reasons that will become clear later, we shall sometimes refer to the one-agent case as the "nonpartisan case" and the two-agent case as the "advocate case."[8]

Under imperfect information about the organization's preferences, the decision maker picks the organization's optimal decision conditionally on the available information. She may make one of two types of errors. Decision making exhibits *inertia* (or "excess budget spreading," depending on the application) when $|\theta| = 1$, and yet the status quo prevails over the efficient cause. Let L_I denote the loss incurred by the organization under inertia. Conversely, there may be *extremism*. The loss when $\theta = 0$ and one of the two causes is embraced is denoted L_E. Finally, let L_M denote the loss incurred by the organization when $\theta = -1$ and cause B is selected or when $\theta = +1$ and cause A prevails (L_M is the loss from "misguided activism").

Let $x \equiv \alpha q$ denote the unconditional probability of collecting information favorable to a cause when spending K to investigate this cause (it is equal to the probability α that there exists such favorable information times the probability q of discovering this information). The posterior belief $\hat{\alpha}$ that $|\theta_j| = 1$, conditionally on no information favorable to cause j having been discovered, is given by

$$\hat{\alpha} = \frac{\alpha(1 - q)}{\alpha(1 - q) + (1 - \alpha)} = \frac{\alpha - x}{1 - x} < \alpha.$$

[7] A precise condition ensuring that such duplication is unprofitable will be provided whenever duplication has a potential benefit in terms of decision making.

[8] Note that we assume that the organization controls who collects and discloses information. This is the case for all examples provided in the Introduction.

While L_E and L_I are the losses for the organization when it has *full* information that the status quo, respectively one of the causes, is optimal and when it makes an inefficient decision, we must introduce their counterparts $\hat{L}_E$ and $\hat{L}_I$ corresponding to the expected losses *conditional on the agents' imperfect information* when a wrong decision is made (for the purpose of computing $\hat{L}_E$ and $\hat{L}_I$, we assume that the agents have exerted effort and that the organization has the agents' information).

First, suppose that the information is (ϕ, P_B). That is, there is a piece of evidence in favor of cause B and none received in favor of cause A. Because the posterior probability that $\theta_A = -1$ is $\hat{\alpha}$, the expected loss from choosing cause B is $\hat{\alpha}L_E$ and the expected loss from choosing the status quo is $(1 - \hat{\alpha})L_I$. We assume that the optimal decision is to choose cause B.

ASSUMPTION 1. $\hat{L}_I \equiv (1 - \hat{\alpha})L_I - \hat{\alpha}L_E > 0$.

Second, we also assume that it is optimal to choose the status quo when no information is received: Suppose that the agents' information is (ϕ, ϕ). The expected loss from choosing the status quo is $2\hat{\alpha}(1 - \hat{\alpha})L_I$, and the expected loss from choosing one of the causes is $[1 - 2\hat{\alpha}(1 - \hat{\alpha})]L_E + \hat{\alpha}(1 - \hat{\alpha})L_M$. The expected loss from moving away from the status quo when the agents have no evidence in favor of either cause is positive when the following assumption is made.

ASSUMPTION 2. $\hat{L}_E \equiv \hat{\alpha}(1 - \hat{\alpha})(L_M - 2L_I) + [1 - 2\hat{\alpha}(1 - \hat{\alpha})]L_E > 0$.

This condition is always satisfied when $L_M \geq 2L_I$, as one would expect.

Finally, we assume that K is not too large relative to the stakes (L_I and L_E), so that the organization always wants to induce the collection of information about the two causes. So, in equilibrium there will be "full information collection" (which does not mean that the organization is perfectly informed with probability one) rather than "limited information collection." We shall also provide conditions under which the organization avoids duplication of effort, that is, the collection of the same information by two agents (proposition 1 below does not require such a lower bound on K).

4. Agents' Preferences

Until Section IV*B* the agents are distinct from the interest groups. They derive their rewards from information collection either in the form of monetary compensation tied to the decision or in the form of reputation (career concerns). They do not internalize the direct benefits of the decision, which go to the interest groups. Career concerns seem more relevant in a number of our examples, but the case of monetary rewards is analytically slightly simpler. So, we shall work

mainly with monetary rewards but must check that our insights are robust to the introduction of career concerns. The key assumption is that under both paradigms the agents' rewards are based solely on the decision.

Monetary rewards.—Unless otherwise specified, an agent receives a decision-contingent monetary reward w. Agents are risk neutral and are protected by limited liability, $w \geq 0$. An agent's utility from receiving wage w and exerting effort on n tasks ($n \leq 2$) is $w - nK$. Agents' reservation utility is equal to zero.

Career concerns.—See Section III*B* and Appendix B for a description.

B. The Decision-Based Rewards Assumption

Since decision-based rewards have hitherto not been analyzed, it is worth investigating which factors lead to such rewards. (This subsection is of interest only to those interested in foundations and can be skipped by other readers.)

There are two related conceptual underpinnings for decision-based rewards. First, the advocate may act on behalf of a dispersed, free-riding constituency (e.g., workers or voters). While the decision (high wage or subsidy) is easily observed by the members of the constituency, they have little individual incentive to exert the effort required to learn the details of the case made by the advocate or its quality. Second, the advocate may act on behalf of a concentrated but ignorant constituency as in the case of a trial. Describing ex ante and measuring the quality of the legal case, say, can be infeasible for the plaintiff or the defendant, who must therefore rely on a less powerful but cheaper decision-based reward. While these two arguments provide the intuition behind the use of decision-based rewards, they are incomplete in that they do not explain why the decision makers (court, legislature, headquarters, etc.) who process the advocates' information and reach a decision on its basis do not administer direct rewards and punishments for the advocates. If we trust the decision maker to pick decisions, why don't we also trust her to allocate rewards?

Consider first the case in which the decision maker and the principal are the same person. For example, the owner of the firm allocates an investment budget to one of two divisions. Suppose that only the decision (A, B, or status quo) is verifiable and that the decision maker promises a reward that reflects not only the decision but also the (observable but unverifiable) information on which the decision is based. However, the principal, when confronted with two offsetting pieces of information (one in favor of each cause),

chooses the status quo and has an incentive to argue that she obtained no useful information in order to minimize the compensation paid to the agent(s). So, for example, with a single agent, the feasible incentive schemes $\{w_A, w_B, w_0, w_2\}$ (corresponding to one piece of information favorable to A, one favorable to B, no pieces of information, and two pieces of information) must satisfy $w_0 = w_2$, that is, be *indirect* reward schemes.[9] We conclude that when the decision maker is the principal, sequentially optimal decisions necessarily maximize organizational goals and direct reward schemes are infeasible.

Providing direct rewards may be equally difficult when the decision maker acts *on behalf of* the principal. Contingent on a status quo decision, the level of salary (w_0 or w_2) is a purely redistributive issue. Hence, if the decision maker (who does not pay the agent's salary herself) has an arbitrarily small pro-agent (or anti-agent) bias—that is, puts at least slightly higher (or lower) weight on the agent's utility than on the rest of the organization—she will choose the highest (or lowest) of w_0 and w_2, and so we can assume as well that $w_0 = w_2$ and hence that rewards are indirect. By contrast, a small enough pro- (or anti-) agent bias does not impair the integrity of decision making. So, wage setting is more sensitive than decision making to a pro- (or anti-) agent bias, and direct rewards cannot improve on indirect ones.

More formally, and in either case, one can show that (*a*) with two agents, a complete contract does not improve on decision-based rewards (this is obvious from proposition 1 below) and (*b*) with a single agent, under some conditions complete contracts again provide no improvement over decision-based rewards: see Appendix A.

III. The Case for Advocacy

A. *Explicit Incentive Schemes*

We first show that under nonmanipulability of information and monetary incentives an advocacy system is strictly optimal.[10]

[9] We assume that the transmission of the two pieces of information is simultaneous.

[10] For the following comparison to be meaningful, one must impose conditions guaranteeing that eliciting two efforts is optimal. So we need to look at the losses with zero and one effort. With zero effort, the loss is $2\alpha(1 - \alpha)L_I$. One effort is better than zero only if hard information leads one to move in that direction. On the other hand, the status quo will prevail if no information has been found, provided that L_M is high enough. Consequently, the loss with one effort is

$$x\alpha L_E + (1 - x)[\alpha(1 - \hat{\alpha}) + \hat{\alpha}(1 - \alpha)]L_I + K$$
$$= \alpha^2 q L_E + \alpha(1 - \alpha)(2 - q)L_I + K.$$

1. Single Agent (Nonpartisanship)

Suppose that a single agent is in charge of both tasks. Let w_A, w_B, and w_0 denote wages when A is selected, when B is selected, and when the status quo prevails. The agent has net utility w_0 when not investigating at all, $xw_i + (1 - x)w_0 - K$ when investigating cause i, and

$$x(1 - x)(w_A + w_B) + [1 - 2x(1 - x)]w_0 - 2K$$

when investigating both causes. Incentive compatibility requires that the agent prefer investigating both causes to investigating one or none. A quick inspection of the incentive constraints shows that it is optimal for the organization to set symmetric rewards $w_A = w_B = w$.[11] This yields

$$x(1 - 2x)(w - w_0) \geq K \tag{1}$$

and

$$x(1 - x)(w - w_0) \geq K. \tag{2}$$

Constraint (1) says that the agent prefers investigating two causes rather than one. When one is exerting effort in a first task, exerting effort on the other task adds an extra effort cost K; with probability x, the investigation of this second cause is successful, which benefits or hurts the agent. With probability $1 - x$, the search on the first task is unsuccessful; the discovery on the second task then moves the decision away from the status quo and increases the agent's reward by $w - w_0$. With probability x, however, the second discovery offsets the first one and reduces the reward by $w - w_0$. So under the assumption that $w > w_0$ (which constraint [2] requires), the second discovery is beneficial to the agent if and only if $1 - 2x > 0$ or $x < 1/2$. That is, because two favorable pieces of information offset each other, a search must be more likely to fail than to succeed in order for the agent to engage in full information collection.

Constraint (2) says that the agent prefers investigating two causes to shirking: Investigating costs $2K$ and yields probability $2x(1 - x)$ of moving away from the status quo, yielding extra wage $w - w_0$.

With two efforts, the loss is

$$2x(1 - x)\hat{\alpha}L_E + (1 - x)^2 2\hat{\alpha}(1 - \hat{\alpha})L_I + 2K$$
$$= 2\alpha^2 q(1 - q)L_E + 2\alpha(1 - \alpha)(1 - q)L_I + 2K.$$

For example, for L_E and K small relative to L_I, two efforts are better than one or zero (since two efforts reduce the probability of inertia).

[11] Suppose, without loss of generality, that $w_A > w_B$. Then reducing w_A and increasing w_B by the same small amount keeps the payoff under full investigation constant while reducing the maximum payoff under partial investigation.

We thus have two cases: If $x \geq 1/2$, there is no wage structure that induces full investigation. If $x < 1/2$, the cost-minimizing scheme inducing full investigation is $w_0 = 0$ and (from constraint [1], which is the only binding constraint in this case)

$$w = \frac{K}{x(1 - 2x)}.$$

The agent then enjoys rent

$$U = 2x(1 - x)w - 2K = \frac{2x}{1 - 2x} K.$$

In this second case, the agent is not partisan since he looks for reasons to favor either cause. But he is an activist in the sense that he is better off moving policy away from its status quo. While surprising at first, the activism of nonpartisans is actually quite realistic. It is rare that a president, a chief executive officer, or a consultant hired by a corporation concludes, after taking his function and analyzing the situation, that nothing is to be changed. His incentive is clearly to get things moving in some direction.[12]

2. Two Agents (Advocacy)

Suppose now that two agents are hired, who are each in charge of investigating one cause. The organization can then obtain the first best despite this incentive problem. Namely, it can pay agent i, in charge of cause i, $w_0 = w_j = 0$ if the status quo or decision j ($j \neq i$) is chosen and $w_i = K/[x(1 - x)]$ if decision i is selected. The agent then obtains $w_0 = 0$ by shirking and $x(1 - x)w_i - K = 0$ by exerting effort.[13] So this incentive scheme both induces effort and fully extracts the agent's rent.[14] Competition between the two agents thus allows the organization either to obtain more information (if $x \geq 1/2$) or to obtain the information at a lower cost (if $x < 1/2$).

[12] For example, consultants will propose a new management strategy. Or French education ministers almost always push for a reform of programs (which often undoes what their predecessors had done a year or two earlier and reverts to some previous policy). There are exceptions to activism (which are not inconsistent with our model). For example, consultants may be hired by the CEO to be servile and support existing corporate policy. These sycophants are obviously given the wrong incentives.

[13] Both agents' exerting effort with probability one is the unique Nash equilibrium if $w_i = \{K/[x(1 - x)]\} + \epsilon$ for arbitrarily small $\epsilon > 0$; for if agent j exerts effort with probability $\beta \in [0, 1]$, agent i obtains utility $x(1 - \beta x)w - K > 0$. So, exerting effort is a strictly dominant strategy.

[14] The first-best result is of course an artifact of risk neutrality and is therefore not to be stressed.

With two agents, it is easy to leave them no rents by giving each a positive wage only if he succeeds in moving policy away from the status quo in his favor: In this case, an agent has no rent when exerting no effort. In contrast, with a single agent, inducing the second effort means offering a wage that leaves the agent a rent if he performs a single effort. Consequently, it is always more expensive to induce two efforts with a single agent. This result is robust to a generalization to continuous effort levels, even though advocates then receive positive rents.[15]

Introducing competition between agents may be reminiscent of the idea of relative performance evaluation (e.g., Holmström 1982*b*). In that literature, the goal is to obtain a performance measure that is more informative about effort by filtering out common random shocks. Here there is no correlation between the information technologies. Instead, separating the tasks between two agents mainly allows the observable decision variable to become monotonic in each effort decision, as in traditional moral hazard models.

Our insight is also related to multitask analyses (Holmström and Milgrom 1990, 1991), where otherwise nonconflicting tasks may crowd each other out because both use the same scarce input, namely the agent's effort. In such a case, a differential in the degree of observability of performance on individual tasks leads to a misallocation of effort across tasks. Holmström and Milgrom then suggest

[15] Assume that effort e_i for cause i costs the agent Ke_i and yields a probability of finding evidence in favor of cause i equal to $\varphi(e_i)$, with $\varphi' > 0 > \varphi''$, $\varphi(0) = 0$, and $\varphi'(0) = 0$ (thus $\varphi(e_i)$ corresponds to $x \equiv \alpha q$ in our binary effort model). Assume that we want to implement $e_A = e_B = e > 0$. With two agents, the advocate for cause i should receive $w_0 = w_j = 0$, and $w_i = w$ should be set so as to have

$$e = \underset{e_i}{\operatorname{argmax}}\ \varphi(e_i)[1 - \varphi(e)]w - e_iK,$$

so $\varphi'(e)[1 - \varphi(e)]w = K$, or $w = K/\{\varphi'(e)[1 - \varphi(e)]\}$. An advocate's rent, $[\varphi(e)/\varphi'(e)]K - eK$, is positive. With a single agent, we want

$$(e, e) = \underset{e_i, e_j}{\operatorname{argmax}}\ \varphi(e_i)[1 - \varphi(e_j)]w_i + \varphi(e_j)[1 - \varphi(e_i)]w_j + [1 - \varphi(e_i) - \varphi(e_j) + 2\varphi(e_i)\varphi(e_j)]w_0 - (e_i + e_j)K.$$

As before, setting $w_0 = 0$ is optimal, and so is setting $w_i = w_j = w$. The first-order condition with respect to e_i implies

$$\varphi'(e_i)[1 - 2\varphi(e_j)]w = K$$

or

$$w = \frac{K}{\varphi'(e)[1 - 2\varphi(e)]}.$$

So rents are higher with a single agent (and $\varphi(e) < \frac{1}{2}$ is a necessary condition for the implementability of (e, e)).

specializing agents in groups of tasks that are similar in terms of observability of performance. In this paper, we assume away any effort substitution problems and introduce instead a direct conflict between tasks, since only *aggregate* performance is observable and is *nonmonotonic* in the effort expended on each task.

Note that we have built our model so as to have a clean test of the impact of indirect rewards on the organizational form. Indeed, the organization would be indifferent between one and two agents if information-based rewards could be specified. It would then suffice to promise agents K/x per piece of evidence.

We summarize this section in the following proposition.

PROPOSITION 1. *Optimality of advocacy under nonmanipulable information.*—Having two advocates strictly dominates having a single (nonpartisan) one: (*a*) (i) If $x \geq 1/2$, there exists no incentive scheme that induces full information collection by a single information collector. (ii) If $x < 1/2$, there exists such an incentive scheme, which abandons rent $2xK/(1 - 2x)$ to the agent. (*b*) By contrast, for any value of x, an advocacy system generates full information collection without abandoning rents to the agents.

Remark.—Under nonmanipulability of information, the single agent is reluctant to exert a second effort to find evidence favorable to cause B because he is afraid that this new evidence might annihilate the benefit he will derive if he finds evidence favorable to cause A. One may object that, if the agent can conceal evidence, he will do so if he finds evidence favorable to the two conflicting causes. He will keep one piece of evidence and throw away the other. It is interesting in this respect to note that, when there is a single agent and when $x \geq 1/2$, the principal obtains more effort by letting the agent have property rights on his information, that is, by allowing him not to disclose evidence he has collected.[16] See Section IV for a broader analysis of manipulation.

B. Robustness to Career Concerns

Appendix B tests the robustness of proposition 1 to the presence of career concerns. To generate career concerns, we must both introduce uncertainty about the agents' ability and assume that future employment opportunities depend on updated beliefs about this ability. Suppose that the agents' probability of unveiling evidence favorable to a cause and of being able to properly convey this information to the decision maker depends not only on their effort but

[16] If $w_A \geq w_B$ and $(x - x^2)(w_B - w_0) \geq K$, the agent will want to exert the second effort if he has the right to conceal the information.

also on their unknown talent as measured by q (or equivalently x) and that a labor market (internal or external, or else voters if agents are politicians) infers from the decision information about the agents' talent and uses this information to update its beliefs. As in the case of monetary rewards, the agents' payoffs are contingent on the decision. The main insights carry over to the presence of career concerns.

There is a new feature under career concerns, besides the standard one that it is harder for the organization to control the agents' rewards. (This new feature stems from the uncertainty about the agents' abilities per se and would exist in the static, explicit reward model of Sec. III*A* as well.) While full information collection by a single agent remains infeasible if the (average) probability of discovering information is high, having a single agent for small (average) probabilities of discovery may dominate an advocacy system because of a new and interesting effect, namely a form of *insurance against extremism*. Under uncertainty about the agents' talents, an advocacy system may confront a talented agent and an untalented one, resulting in a high probability of moving away from an optimal status quo because the untalented agent fails to defend his case properly whereas the talented one succeeds. Using the same agent for both tasks reduces the probability of extremism. By contrast, using one or two agents has no effect on the probability of inertia (which, recall, arises when it is optimal to favor one cause but no evidence is collected in favor of that cause).

Let $E[\cdot]$ denote the expectation operator with respect to the prior probability distribution of the probability x of finding information when one is diligent (induced by the prior probability distribution of talent $q = x/\alpha$). Appendix B then proves the following result.

PROPOSITION 1′. *Nonmanipulable information and career concerns.*— Under career concerns the following properties are true: (*a*) Full information collection by a single agent is infeasible if $E[x(1 - 2x)] \leq 0$, whereas it is feasible under advocates if career concerns are sufficiently strong (i.e., when the agents' discount factor is high enough). (*b*) If $E[x(1 - 2x)] > 0$ and career concerns are strong enough, full information collection is feasible with one or two agents. The nonpartisan system dominates the advocacy system because it yields a lower risk of extremism and the same risk of inertia.

Let us return for the rest of the paper to the case of explicit incentives.

IV. Manipulation of Information

We now turn to a more general discussion of the costs and benefits of competition in information creation. The general argument de-

veloped in this section is that advocacy induces agents to manipulate evidence that disserves their cause. While the organization should be happy to let agents embrace a cause "up to a point" or "subject to certain rules of the game" (indeed they often specify so), they do not always have the required information to check that the advocates comply with the rules of the game, that is, do not engage in undue manipulation of contrary evidence.

A. *Concealment of Information*

Let us extend the model of Section III*A* by assuming that in the process of searching for evidence favorable to cause i, an agent has some probability of finding a "counterargument" or "contrary evidence" on top of the favorable evidence: The ministry of the environment may find that pollution is costly to curb, the ministry of energy may find that nuclear power will be expensive, and so forth. Assume further that the agent can hide (destroy) the contrary evidence. As we shall see, the advocate has no incentive to release this sort of information, whereas a more impartial agent would have some such incentive.

Specifically, when exerting effort to search for information relative to cause i, an agent has probability $1 - z$ of learning nothing. With probability $z\beta$, he learns, as before, one favorable piece of information, P_i, so that $|\theta_i| = 1$. And with probability $z(1 - \beta)$, he learns two conflicting pieces of information: P_i and N_i. In this last case, the counterargument N_i perfectly offsets (nullifies) the "argument" P_i in that learning two conflicting signals is informationally equivalent to learning nothing. We thus summarize (P_i, N_i) as $\tilde{\phi}_i$, which is thus equivalent to ϕ for the purpose of updating beliefs if there is no manipulation of information. In contrast, learning P_i means that N_i does *not* exist, so that $|\theta_i| = 1$ for sure. (Counterargument N_i is one possible formalization of contrary information. It should be clear that this specification is chosen so as to simplify the analysis and has no impact on the insights.) In the notation of Section III, the probability of finding truly favorable information is $x = \alpha q = z\beta$. The posterior belief that $|\theta_i| = 1$ when learning ϕ (no information) or learning $\tilde{\phi}_i = (P_i, N_i)$ is equal to $\hat{\alpha} = (\alpha - z\beta)/(1 - z\beta) < \alpha$.

We now assume that information can be concealed; that is, agents can decide whether or not to report the P_i's and N_i's to the decision maker. Concealment thus consists in either announcing ϕ ("I have learned nothing") when having information or revealing only P_i when one in fact has the counterargument N_i as well. In this world, efficient effort and full disclosure are incompatible: For an agent to reveal both good and bad news about a cause (P_i and N_i), he must obtain the same reward as when he announces ϕ or P_i, and so he is

better off exerting no effort. Inducing search effort for both causes is, however, feasible when using one or two agents.

Finally, we make an assumption that will guarantee that an advocate has an influence on decision making. Because an advocate for cause i conceals information N_i not favorable to cause i, the decision maker may find that the disclosure of P_i is not informative enough to justify embracing cause i even when there is no favorable information concerning cause j. That is, the manipulation of information may render the advocate noncredible (for more on the issue of credibility, see subsection *B*). To avoid this and given that, conditionally on disclosure of P_i by an advocate of cause i, there is a probability β that the agent has indeed observed $|\theta_i| = 1$ and a probability $1 - \beta$ that his beliefs are actually $\hat{\alpha}$, we make the following assumption.

ASSUMPTION 3. $\beta \hat{L}_I > (1 - \beta)\hat{L}_E$.

The formal analysis of this extended model is straightforward and is performed in Dewatripont and Tirole (1997). Here are the main insights. First, the possibility of concealing information makes it always feasible to induce full information collection by a single agent, although at the cost of leaving him a rent. Errors in decision making due to the manipulation of information by the single agent always take the form of extremism, as one would expect when the agent is not rewarded for arguing in favor of the status quo. Thus the single agent is an activist.

Second, with two agents, full information collection does not require leaving rents (again as in proposition 1). Because full disclosure is incompatible with information collection, each agent will disclose either favorable information (P_i) only or the two conflicting pieces of evidence (P_i, N_i) only. The former case is the case of advocates, who conceal evidence contrary to their cause. The second case is labeled "prosecution" because the release of (P_i, N_i) then leads to a lower posterior probability that $|\theta_i| = 1$ than the announcement of no learning (ϕ), which may indeed correspond to no learning but may also reflect the existence of concealed favorable information. The case of prosecution is very related to advocacy, with each agent in charge of destroying, rather than supporting, a cause. Whether the agents become advocates or prosecutors depends, of course, on the incentives they receive. Advocates and prosecutors generate both extremism *and* inertia. For instance, under advocacy, inertia occurs when there is favorable information about cause i and contrary evidence about cause j. Advocate j then conceals the contrary evidence, and the decision maker receives favorable evidence in favor of both causes and selects the status quo.

By computing the losses in organizational welfare under the three possible regimes (one nonpartisan or activist agent, two advocates,

and two prosecutors), we can show that the loss differentials due to the manipulation of information by the agents are

$$\begin{aligned} L^{\text{advocacy}} - L^{\text{nonpartisanship}} &= [2z^2\beta(1-\beta)]\hat{L}_I \\ &\quad - [z^2(1-\beta)^2]\hat{L}_E \\ &\quad - 2z^2\beta^2 L_E - \left(\frac{z}{1-z}\right)K \end{aligned} \tag{3}$$

and

$$L^{\text{advocacy}} - L^{\text{prosecution}} = [2\beta z(2z - z\beta - 1)]\hat{L}_I. \tag{4}$$

Our conclusions can then be summarized in the following proposition.

PROPOSITION 2. *Information concealment: possible organizations.*—Under information concealment, three possible organizations may emerge. (*a*) A single agent is a nonpartisan activist, and errors take the form of extremism. (*b*) Advocates defend a cause and conceal evidence contrary to it. They generate both inertia and extremism. (*c*) Prosecutors look for evidence contrary to a cause and conceal evidence favorable to it. They too generate both inertia and extremism. (*d*) The status quo is more likely to prevail under either advocacy or prosecution than under nonpartisanship.

PROPOSITION 3. *Information concealment: comparative statics.*—(*a*) A single nonpartisan agent is optimal if, ceteris paribus, L_I is large enough relative to L_E and K. (*b*) Bilateral advocacy is optimal if, ceteris paribus, $\beta \to 1$. (*c*) Bilateral prosecution is optimal if, ceteris paribus, $z \to 1$.

As mentioned above, bilateral advocacy and prosecution generate both inertia and extremism, whereas a single activist generates only extremism. The latter is optimal if the relative cost of inertia is high enough, as stressed in case *a* of proposition 3. Cases *b* and *c* concern instead instances in which bilateral advocacy and prosecution, respectively, tend to achieve full revelation of information, because there are in essence only two possible signals (P_i and ϕ, and P_i and $\tilde{\phi}_i$, respectively). In these cases, losses relative to full revelation of information vanish, which is not the case with a single agent.

PROPOSITION 4. *Prohibition of manipulation.*—If the organization were able to detect and punish the concealment of information, it would always want to do so with advocates and prosecutors (except for $\beta = 0$ or 1). By contrast, the prohibition of information concealment may hurt the organization in the case of a single agent.

This set of results can be related to the literature on disclosure (e.g., Grossman and Hart 1980; Milgrom 1981; Milgrom and Roberts

1986; Shavell 1994; Shin 1994). Of particular interest is the recent paper by Shin (1998), who investigates whether a principal/judge facing two competing parties with vested interests may benefit from delegating them information collection. Shin treats the information collection process as exogenous in order to focus solely on incentives to disclose the collected evidence. The cost of delegation comes from concealment of information, due to (exogenous) partisan preferences. The assumed benefit is that, on average, two observations about the truth are collected instead of one. Indeed, Shin assumes that each party is, on average, as well informed as the principal. When the principal suspects that, in a particular case, one party has very good information, he can "allocate her the burden of proof" and thereby suffer little from potential concealment. Shin shows that this leads to the optimality of delegation in this setup. He also makes connections with comparative legal systems, as we do in Section VI.

One issue Shin abstracts from is the fact that more information collection under bilateral advocacy can have a cost. In our paper, the amount of information collection is the same under all organization structures. In a paper that builds on our model, Palumbo (1997) shows that duplication of efforts can, however, be attractive when two agents are hired, to induce them to "keep one another in check." This argument can rationalize the desirability of enhanced information collection under bilateral advocacy.

Remark.—We have assumed all along that moral hazard in information acquisition made it necessary to provide powerful incentive schemes for the agent(s), leading to advocacy, prosecution, or activism. These incentive schemes induce concealment as well as acquisition. If information collection is easy, it makes sense to reduce the power of incentive schemes so as to eliminate the agents' aversion toward the status quo and to induce truthful release of existing information. For example, if, in the absence of effort, an agent acquires information relative to a cause with probability only slightly lower than that when he exerts effort, then a flat scheme $w_0 = w_A = w_B$ for a single agent avoids concealment without reducing information acquisition much. We pursue the general theme of the desirability of low-powered incentives for truthful revelation of information in the next subsection.

B. Self-Advocacy versus Representative Advocacy

Until now we have assumed that the agents and the constituencies are separate entities. In several instances, though, the constituencies face a choice between pleading their own cause (self-advocacy) and hiring agents to represent them (delegated or representative advo-

cacy). Or, perhaps, the principal may have a preference for one form of advocacy over the other. What are the costs and benefits of each alternative? The benefit of self-advocacy is clear: agents must be provided with incentives. Representative advocacy in general introduces an agency cost.[17]

We argue that there are two related forces against self-advocacy. Both are driven by the idea that the powerful incentives of self-advocates may induce them to misbehave, for example by overstating their case or forging information, and may hurt the principal or backfire on the constituency. First, the principal may distrust self-advocates and require or encourage the use of milder advocates (accountants, consulting firms, independent lobbyists, or sellers facing low commission rates) who will provide more reliable information. Second, the constituencies may prefer to hire a representative themselves even if they are not pressured to do so by the principal. Indeed, self-advocacy may amount to the lack of advocacy if it lacks credibility, and therefore the constituency may prefer to be represented by a mild advocate rather than have little impact on the decision process.[18]

These points are illustrated most simply by focusing on a single cause, cause A. Suppose, for example, that the search in the direction of cause B has been unsuccessful, so that the posterior belief that $\theta_B = +1$ is equal to $\hat{\alpha}$. The information collected about cause A has three possible values (the following probabilities are conditional on the exertion of effort): ϕ, $\tilde{\phi}_A$, and P_A, with probabilities $1 - z$, $z(1 - \beta)$, and $z\beta$, respectively. Information P_A is information favorable to cause A and should lead to the choice of A (given that there is no information about cause B). Information ϕ and $\tilde{\phi}_A$ both amount to a lack of information about cause A and therefore should lead to the status quo. However, in state $\tilde{\phi}_A$ the agent can forge the information and, at private cost f, transform it into information P_A. Information ϕ, in contrast, is not forgeable. Information ϕ (i.e., an unforgeable lack of information) is received with probability one when no effort is exerted. Thus the information technology is the same as in subsection A, except for a cost of concealing contrary

[17] There are two ways of introducing an agency cost in our model. The first is to assume that the constituency is, a priori, more knowledgeable than a prospective agent and therefore has a cost of acquiring information and preparing the case lower than K. The second and more standard one is to assume that the agents are risk averse so that they are paid more than K on average. To avoid adding notation, we keep assuming that agents are risk neutral, and we assume that the constituency's cost of acquiring information is the same as an agent's.

[18] This idea can be contrasted with the point made, e.g., in the bargaining literature that it may be advantageous to delegate decision making to an agent who is *tougher* (e.g., more patient) than oneself.

evidence. Forging cost f is the private cost incurred to "detach" from $\tilde{\phi}_A \equiv (P_A, N_A)$ contrary information N_A in order to be able to disclose only favorable evidence P_A. We assume that forging cannot be detected by the decision maker (although it can be anticipated). Let G denote the gain accruing to constituency A when cause A is favored over the status quo.[19] We assume that $G > f$, so forging can be attractive to a self-advocate. We further require that $(z\beta)f > K$.

We distinguish between two cases, depending on whether assumption 3 holds.

a) Forging does not alter much the reliability of information: $\beta\hat{L}_I > (1 - \beta)\hat{L}_E$. That is, the principal chooses to favor cause A when receiving signal P_A even though she is aware that the agent forges information whenever he has the opportunity to do so. In this case, the constituency bears no cost of self-advocacy. The principal, however, incurs a loss as a result of the forging of information. The principal is then better off requiring that the constituency hire an advocate with reward structure $\{w_A, w_0 = 0\}$, where $w_A < f$, in order to avoid forging.[20] That is, the principal demands a low-powered incentive scheme for the information collector, and such an incentive scheme is inconsistent with self-advocacy. The stakes are just too high.

The logic behind this reasoning is highly reminiscent of the literatures on influence costs (Milgrom 1988) and multitask agency theory (Holmström and Milgrom 1991). The similarity with the work on influence costs is that the agent may have excessive incentives to convince the principal to pick a decision favorable to him. The analogy with the multitask literature is that the agent may do poorly on one task (here, "not forging information") when given powerful incentives on another (here, "convince the principal to embrace his cause"). The novelty of our analysis, besides the specificity of the application, is the use of delegation as a device to reduce the power of incentives in an influence cost context.

b) Forging makes the self-advocate noncredible: $\beta\hat{L}_I < (1 - \beta)\hat{L}_E$. In this case, the principal prefers picking the status quo even when the self-advocate brings information P_A, as long as the self-advocate forges information whenever feasible. It is clear that the equilibrium

[19] For simplicity we assume that G is state-independent. For example, G might be the deterministic private benefit enjoyed by a division manager when receiving a large investment budget and the state of nature would refer to the profitability of this investment (G is then independent of the state of nature if the manager has flat monetary incentives). Our analysis can obviously be generalized to state-dependent G's. Note also that G may be included in L_E, L_I, and L_M.

[20] Note that f may, moreover, be higher for some representative advocates if it includes, e.g., the loss of reputation for independence in case of detection.

is then in mixed strategies. The self-advocate forges with probability γ when having information $\tilde{\phi}_A$, and the principal favors cause A with probability ν when receiving information P_A. Equilibrium conditions are

$$(1 - \beta)\gamma\hat{L}_E = \beta\hat{L}_I$$

and

$$\nu G = f.$$

The self-advocate's payoff is then equal to, for example, the one he obtains by not forging, namely $z\beta\nu G = z\beta f$. The self-advocate suffers from a lack of credibility. Indeed the self-advocate almost never succeeds in pushing his cause when the cost of forging is small. (Note that he will want to collect information as $z\beta f > K$ by assumption.)

Suppose now that the constituency publicly hires an agent and pays him $w_A = K/z\beta$ if cause A is favored (and cannot later raise the power of the incentive scheme through a secret deal). Because $w_A < f$, this agent does not forge information. He is credible and provides the constituency with an expected payoff equal to

$$z\beta(G - w_A) = z\beta G - K > z\beta\nu G - K.$$

The constituency is therefore strictly better off being represented.

PROPOSITION 5. *Optimality of delegated advocacy.*—Ignore any agency cost of delegation to a representing agent. Then (*a*) when forging does not alter much the reliability of information ($\beta\hat{L}_I > [1 - \beta]\hat{L}_E$), the principal wants to impose delegated advocacy; (*b*) when forging substantially alters the reliability of information ($\beta\hat{L}_I < [1 - \beta]\hat{L}_E$), both the principal and the constituency are better off under delegated advocacy.

V. Integrity of Decision Making: Advocacy and Endogenous Appeals

We have maintained the assumption that the decision maker picks the decision that is optimal for the principal/organization. This assumption is natural when the decision maker is also the principal. One may question the validity of the assumption when the decision maker is herself an agent for the principal. In effect there is a concern that judges, arbitrators, prime ministers, headquarters, and so forth may not perform their adjudication role properly because of capture, political agendas, or mere incompetency. This section makes the following points in this respect (the first two are obvious): (1) Appeals are an efficient way to keep potentially biased decision makers on their toes. (2) Endogenous appeals (triggered by the par-

ties involved in the decision process) are less costly than exogenous appeals (i.e., investigations or reviews triggered in a mechanistic way by the decision itself). (3) Advocacy is an efficient way of generating endogenous appeals.

The argument is simple. Suppose, for example, that the decision maker may have a political agenda leading her to favor the status quo or one of the two causes. (This can be formalized by a probability that the decision maker enjoys a private benefit from one of the three decisions.) Suppose further and for simplicity that there is a possibility that her decision will be reviewed by a second decision maker who does not have such an agenda and makes the optimal decision conditionally on the information generated by the agent(s) and that the appeal to this second court is very costly. One may have in mind that the second court is a very costly process in which many parties are involved and the process is structured so as to avoid bad decision making. Alternatively, this second court might be a shortcut for a sequence of appeals through which the correct decision might end up being adopted.

Because appeals are very costly and if punishments are limited, appeals should be used as an off-the-equilibrium-path threat rather than as an on-the-equilibrium-path procedure. This implies that systematic, decision-contingent reviews are not optimal here.[21] Rather, appeals should be endogenous. Suppose now that a single agent is employed. To induce effort, this agent is made into an activist, that is, is rewarded more when there is a move away from the status quo. This implies that *the nonpartisan cannot be relied on to provide a check against a decision maker with a political agenda in favor of a specific cause.* The agent does not make an appeal when the decision maker unduly prefers cause i to the status quo.

Another way of making this point is that it is important in a single-agent setup to bring the interest groups into the decision process (even if this is costly) and to empower them with the possibility of making an appeal if the decision does not fit with the evidence that is provided by the agent.

In contrast, advocates create an efficient appeal mechanism; for when the decision maker does not pick decision i when cause i should be favored or favors cause $j \neq i$ when the status quo is optimal, the advocate for cause i has an incentive to appeal as long as $w_i > w_0 > w_j$. Therefore, advocates keep the decision maker on her toes through the threat of appeal.[22]

[21] One could conceive exogenous appeals that occur with very small probabilities. However, such appeals have no deterrent effect if punishments are limited.

[22] Giving strict incentives to appeal rules out $w_0 = w_j = 0$. Instead w_0 has to exceed w_j by a small positive amount ϵ plus possibly any cost of appeal, such as the cost of going to court.

This last point can be related to the literature on disclosure and in particular to the result due to Milgrom and Roberts (1986), according to which an organization can costlessly obtain disclosure of several pieces of information as long as for each piece of information at least one party has an interest in disclosing the piece. In our framework, appeals are similar to disclosure of the information that decision making was improper. We argue that it is useful to create biased agents who have an interest in challenging decisions that go too far in the direction opposite to their bias.[23]

PROPOSITION 6. *Advocacy generates efficient appeal.*—Any bias in the decision maker's choice is appealed in an advocacy system, provided that the advocate for cause i faces reward $w_i > w_0 > w_j$ ($i = 1, 2$, $j \neq i$). By contrast, a biased choice embracing one of the two causes is not appealed in a single-agent system.

The conclusion we obtain here is, we think, very relevant, but too stark, since frivolous appeals are common in advocacy systems. We leave the study of foundations of frivolous appeals for future research.

VI. Applications

A. *Comparative Legal Systems*

The issues in this paper have been discussed by comparative law experts (see, e.g., Zweigert and Kötz 1987; Luban 1988). Indeed, one difference between common-law (or Anglo-Saxon) countries and civil-law (or Roman-Germanic) countries concerns trial procedures. Experts tend to speak, respectively, of "partisan" and "inquisitorial" procedures. Common-law countries, especially the United States, put substantial weight on advocates relative to judges, procedures being particularly influenced by the paradigm of jury trials. Judges tend to be relatively passive and, for example, leave it to the advocates (and, in criminal cases, the prosecution) to choose their own expert witnesses. Lawyers, on the other hand, "should represent a client zealously within the bounds of the law" (American Bar Association Code). In practice, this means, for example, rehearsing witnesses to make sure that they say what is in the client's interest. This kind of procedure is considered unethical in civil-law countries, where advocates' first duty is to help justice, and thus judges. The

[23] We maintain the assumption that the agents' rewards are based solely on decisions, and we thus rule out rewards for successful appeals. In Dewatripont and Tirole (1997), we discuss several reasons why such rewards might be difficult to implement in practice: strategic concealment of information in order to receive such rewards, low responsiveness to monetary incentives (but strong career concerns), and the psychological cost of breaking private deals.

system is called "inquisitorial" in that judges have a lot of freedom to direct the debates by asking questions and also by being the ones who choose expert witnesses.

A number of experts have defended the partisan system as the best way to get at the truth: Zweigert and Kötz (1987, p. 282) quote Lord Eldon, a famous lord chancellor in the United Kingdom, as saying in 1822 that "truth is best discovered by powerful statements on both sides of the question." Particularly interesting is the American Bar Association's official justification of the adversary system:

> Any arbiter who attempts to decide a dispute without the aid of partisan advocacy . . . must undertake, not only the role of judge, but that of representative for both of the litigants. Each of these roles must be played to the full without being muted by qualifications derived from the others. When he is developing for each side the most effective statement of its case, the arbiter must put aside his neutrality and permit himself to be moved by a sympathetic identification sufficiently intense to draw from his mind all that it is capable of giving—in analysis, patience and creative power. When he resumes his neutral position, he must be able to view with distrust the fruits of this identification and be ready to reject the products of his own best mental efforts. The difficulties of this undertaking are obvious. If it is true that a man in his time must play many parts, it is scarcely given to him to play them all at once. [Fuller and Randall 1958, p. 1160]

On the other hand, a number of experts deplore the excesses of the partisan system in terms of unethical behavior by lawyers (e.g., Frankel 1975, 1980; Luban 1988). Some others defend it while stressing that advocates have "a moral obligation to go along with the testimony of perjurious clients and to discredit—brutally if necessary—opposing witnesses known to be telling the truth," as Luban (1988, p. xxi) summarizes Freedman's (1966, 1975) famous work on criminal defense lawyers. While some writers would definitely not go as far as Freedman, it is nonetheless clear that lawyers are at times prevented from telling the truth to the court by the right of the parties not to testify against themselves and by the confidentiality of the lawyer-client relationship. In turn, this confidentiality is seen as a precondition for the transfer of information from the client to the lawyer. The ethical problem has been recognized, and some procedures are there to limit it: cross-examination of witnesses, advance notice of potential witnesses, and pretrial interrogation of the other side's witnesses, to take some examples.

In contrast with the common-law system, the civil-law system has been defended for its greater impartiality. Kaplan, von Mehren, and Schaefer (1958) argue that in Germany and neighboring countries in continental Europe, procedural law is based on the idea that it is easier to get at the truth if the *judge* is given a stronger role and is entitled to question, inform, encourage, and advise the parties, lawyers, and witnesses so as to get a true and complete picture from them: "He is constantly descending to the level of the litigants, as an examiner, patient or hectoring, as counselor and adviser, as insistent promoter of settlements. Withal he has not entirely lost his character as a civil servant—though of a special type—in a government department" (p. 1472). While the civil-law system can be advocated for fear of abuses of partisanship, it has been noticed that it can itself be subject to abuse by judges:[24]

> The fact that in Germany the judges, not the parties, choose expert witnesses is similarly two-edged. It does prevent one of the most unseemly and disgraceful spectacles in American adjudication, the combat of extravagantly compensated, carefully coached, uncompromisingly partisan experts. But since the German judge usually appoints only one expert and relies on her testimony, any biases in the judge's selection process or the expert's views will be disastrous for the luckless party. Thus the system requires a great deal of trust in the integrity of both judges and experts. [Luban 1988, p. 100]

These comparative legal perspectives highlight the relevance of a number of insights derived in our paper. First, and most important, the quote by Fuller and Randall, which represents the American Bar Association's defense of the "partisan" system, fits well with our analysis, since it stresses the difficulties in strongly pursuing both causes at the same time.

Second, it is also clear that concealment and even forging are very much on the mind of observers of the partisan system. Authors such as Freedman even argue that partisanship necessarily implies concealment and forging; he thus finds it inconceivable to have the advantages of partisanship without these disadvantages. While his interpretation is a bit controversial, concealment can clearly result from the confidentiality of the lawyer-client relationship, itself justified by the need to develop a transparent relation between them. This last element is *not* present in the analysis above and would be an interest-

[24] This concern is not totally absent in the common-law system: Judges have reputations, and lawyers play strategies at times to get "favorable" judges.

ing avenue for further research building on our study of representative advocacy.

Finally, the "inquisitorial" system is a nonpartisan, one-agent system, where the decision maker also plays the role of the agent, or has it played by "independent" expert witnesses, as opposed to competing partisan expert witnesses chosen by each party. That the judge plays the role of the agent is made clear by the quote of Kaplan et al. Still, one could not call him an activist since no financial incentives are given to him to pursue specific causes. One can even argue that, in the civil-law system, his role is less one of a "lawmaker" and more one of a "faithful abider" than in the common-law system. He is supposed to be driven by a "reputation for fairness," with possibly some probability of bias. As the quote by Luban stresses, authors have been aware that the inquisitorial system, relying on a single agent/decision maker (the judge), is more prone to abuse when the decision maker is biased than the partisan system.

B. *Political Science: The Role of Congressional Committees*

Our work can shed some light on the debate among political scientists on the formation of committees in the U.S. Congress. We can distinguish here between the "distributive" approach pioneered by Shepsle (1978) and the "informational" approach summarized in Krehbiel (1990, 1991) (see also Gilligan and Krehbiel 1989, 1990). The distributive approach offers a positive view of committees as a coordination device designed to allow all congressional representatives to implement programs that will please their geographic constituencies while being paid by the taxpayer at large. According to this view, committees end up being staffed by "homogeneous high demanders" (who will thus recommend some inefficient, or "pork barrel," programs) and are granted agenda-setting power in order to get their way. "Gains from trade" are obtained by all members of Congress since they all sit on a number of committees where they can exert their biases.[25]

The informational approach challenges this view by stressing the role of committees as providers of expertise. Congress at large is forced to delegate policy proposals in each area to a smaller subset of its members simply because of time constraints. The role of the committee is to inform Congress about objective facts about various

[25] Why Congress in the aggregate finds it profitable to fund pork barrel programs can be rationalized by "political benefits" or "tax illusion" (see Shepsle and Weingast 1981).

policies and then to make recommendations. Theoretical work in this area relies on signaling models. When receiving the recommendation signal, Congress takes into consideration the political composition of the committee and chooses a policy according to its *own* political preferences. Here, the committee should ideally not get agenda-setting power[26] and should be as trustworthy as possible for Congress, that is, be as close as possible to its median voter. The prediction of the theory is that committees should not be composed of "homogeneous high demanders," but of "homogeneous moderates." The median voter in Congress would want committee members' preferences to be as aligned with hers as is consistent with the available workload of members of Congress.

The empirical evidence does not fully discriminate between the two theories. For example, most members of the agricultural committees are from rural states, and most members of the judiciary committees have law-related degrees. On the other hand, Krehbiel shows that almost all committees (the only exception is the Armed Services Committee) are heterogeneous in terms of rankings compiled by various policy groups (e.g., Americans for Democratic Action for general rankings, or more policy-specific rankings).

Our own approach differs from Shepsle's in that we are primarily concerned with the design of efficient political processes. Yet, our approach is consistent with Shepsle's observations if one views the committee system as a system of advocacy *across* committees. The budgetary process is then best depicted as an incentive system in which each committee is expected to make the case for a specific set of expenditures (education, defense, etc.).[27]

Conceptually, our approach is closer in spirit to the informational approach, which also takes an efficiency-based and information-based perspective. However, we offer a rationalization of heterogeneous committees whereas the informational approach does not: there, a heterogeneous committee is better than a homogeneously biased committee (which will end up being less informative), but, as we observed, the ideal would be a committee composed only of members of Congress with the *same* preferences as Congress's median voter. In our theory, instead, there is positive value to heterogeneity *within* a committee, in that competing advocates can generate more information than a representative middle-of-the-roader, as long as the decision space has more dimensions (left-right, geo-

[26] One exception to this principle concerns the case in which the committee can be motivated to acquire expertise only by the assurance that it will not be systematically overruled by Congress (on this see Sec. VII).

[27] We thank Ken Shepsle for suggesting this interpretation.

graphic distribution, etc.) than just the arbitrage between broad budgetary items (education, defense, etc.). Further, the advocacy approach predicts, and indeed we observe, dissent and minority reports by members of committees. Relatedly, the prevalence of representative committees is prima facie evidence of the benefits of an advocacy system. (Why the majority internalizes this efficiency concern and does not nominate only its own members to committees must be traced to the existence of a repeated game and reputational concerns.)

Our approach can thus offer a "reconciliation" between the Shepsle and Krehbiel approaches by interpreting the committee system as an advocacy arrangement in which legislators for whom farm subsidies are salient advocate those policies through the Agriculture Committee, those with defense plants in their districts push for large defense appropriations, and so forth. In this interpretation, biased committees become a way to generate information through competing advocates in order to determine an efficient allocation of the *global* federal budget. The advocacy approach is also consistent with Krehbiel's informational view and may help explain the dimension of political heterogeneity *within* committees.

C. *Economic Illustration: Energy Regulation*

Our model belongs to a more general class of incentive problems. At an abstract level this class of incentive problems can be described as follows. A principal cares about effort in two directions, X and Y. The principal's objective function $U(X, Y)$ is increasing in both X and Y. On the other hand, the agent(s) can be given incentives based only on a contractible or observable variable m whose cumulative distribution $F(m|X, Y)$ is (in the sense of first-order stochastic dominance) increasing in X and decreasing in Y.[28] Such problems are not well behaved. In particular, the standard monotone likelihood ratio property (or its generalization) is not satisfied. For example, if the principal cares about total effort ($U(X, Y) = X + Y$), the likelihood ratio is not monotonic in the performance measure. We conjecture that there is a strong tendency toward task separation in this class of agency problems.

Nonstandard agency problems of this sort are actually common. They include all decision problems in which one must evaluate the pros and cons of policies. But there exist applications that do not fit the paradigm of a decision maker relying on information col-

[28] In our model, $m \in \{A, 0, B\}$, and X (respectively, Y) is the effort exerted to find evidence favorable to cause A (B).

lected by an agent. Consider "demand-side management" in electricity regulation. A number of U.S. power companies are instructed to educate consumers on how to reduce their electricity consumption. At the same time, they also are meant to supply a high quality of service. Sales (m) depend negatively on demand-side management effort (X) and positively on service (Y). Some economists (see in particular Joskow [1990]) have argued that it is difficult to structure the public utility's incentives in such situations and that it would be more efficient to allocate the demand-side management to a conservation advocate while putting the public utility in charge of increasing sales, a conclusion much in line with the philosophy of this paper. Another often-discussed example of conflicting task assignment is the allocation of prevention and cleanup of banks to a single regulatory agency. Such an agency may not want to engage in offsetting efforts of prevention and cleanup if it is politically accountable and if the voters observe only the number of banks caught violating capital adequacy requirements.

From a theoretical point of view, note that this formulation does not require any assumption about noncontractibility: If m is the only variable observed by the principal, it is obviously the sole basis for contracting. Investigating the generality of the structure we just sketched is an interesting avenue for research.

VII. Topics for Future Theoretical Research

Several promising lines of research would help obtain a more complete picture of the role of advocacy in organizations.

A. *Separation of Investigation and Adjudication*

We have taken the line that information collectors should not be "judge and party" and that independent decision making, first, is more efficient than decision making run by information collectors and, second, provides a more accurate measure of their performance. Yet the role of some advocates or nonpartisans is not entirely confined to the provision of information and the defense of a cause. That is, information collectors may have *some* influence on decision making beyond the informational impact. Committees in Congress influence decisions not only through their recommendations but also through their agenda-setting powers. Relatedly, the union and the management constrain an arbitrator's choice in a final offer arbitration. These departures from the principle of the separation of investigation and adjudication suggest interesting directions for research. One may, for example, wonder whether the participation in

decision making might not be an (inefficient) substitute for missing incentives to collect information.

The potential gain from transferring some decision rights to an information collector is that it enhances his incentives to acquire information.[29] In our explicit incentive model, advocates in particular never have insufficient incentives to acquire information (indeed Sec. IV*B* has emphasized that advocates may have excessively strong overall incentives). The separation of investigation and adjudication is optimal. By contrast, if information collectors have insufficient incentives to collect information (because of risk aversion or the noncontractibility of the decision, as in the career concerns model of Sec. III*B*), it may become optimal to depart from the separation of investigation and adjudication.

B. Competition and Cooperation among Advocates

Our model depicts an elementary arbitrage between *two* causes. Consequently, an advocate has a simple strategy: promote everything that is favorable to his cause and criticize anything that benefits the rival cause. Some decisions involve a more complex choice among n causes. Furthermore, advocates may have or develop "localized expertise," namely expertise that is useful to assess their own cause and related competing causes but is of little help to examine very differentiated alternatives. In such situations, advocates may compete mildly with each other, with a view to treating rival causes with respect. Such concerns may well result in overprovision of positive information and underprovision of negative information. Consider, for instance, a job opening for a tenured position in a department. Those defending the appointment of researcher A in field X realize that providing negative information about competing researcher B in the same field raises the probability that A will be offered the job but also lowers the overall probability that someone in field X will be chosen. Similar observations could be made for primaries in presidential or district representative elections.

C. Combining Partisanship and Nonpartisanship

We have limited the number of agents by invoking costs of duplicating the collection of information. This led us to a choice between

[29] See Aghion and Tirole (1997) for a description of the mutual interdependence between decision rights and information structures. An alternative explanation for the transfer of some decision rights to an information collector might be the desire to reduce the dimensionality of the information the decision maker must process before being able to reach a decision.

partisanship and nonpartisanship. Because both approaches are imperfect, organizations have sometimes combined them at the cost of duplication. For example, a CEO, president, prime minister, head of an antitrust authority, and so forth all have their own headquarters or staff, which are meant to form an independent and nonpartisan counterpower to the advocates (divisions, ministries, plaintiff and defendant, etc.). We conjecture that these nonpartisan officials often receive direct rewards in that their promotions and other rewards are provided by the decision maker herself. (This does not mean that the headquarters and staff can be entirely relied on as sources of information. Indeed, we have argued that advocates play an important role in generating information for decision making.)[30] So we observe combinations of direct and indirect rewards, as well as of partisans and nonpartisans. Some of the distinctions between the executive and legislative branches could be analyzed in this light, for example, in order to understand the respective roles of representatives and prefects in providing the central government with information about their jurisdiction.

VIII. Summary

The main contribution of the paper has been to provide a rationale for advocacy. After observing that many organizations (corporations, judiciary, and the executive and legislative branches of government) use competition among advocates of special interests to improve policy making, it has argued that advocacy has two major benefits. First, the advocates' rewards closely track their performance whereas nonpartisans' incentives are impaired by their pursuing several causes at one time. Second, advocacy enhances the integrity of decision making by creating strong incentives to appeal when there is an abusive decision.

We have pointed out that the use of biased agents also has costs. It creates a different pattern of manipulation of information. It is interesting that the status quo is more likely to prevail under advocacy than with a nonpartisan: While advocates often neutralize each other, a nonpartisan is eager to move policy away from the status quo. Using multiple agents also creates a new bias in decision making by opposing agents with possibly different talents.

We have also observed that self-advocates, that is, parties pleading their own cause, are likely to overstate their case. The organization, concerned by the resulting loss in information, or the self-advocate

[30] On problems that may arise with nonpartisan advisors, see Coleman's (1990, pp. 387–89) discussion of sycophancy and "yes-men."

himself, fearing a lack of credibility, may hire or impose hiring of a representative advocate with less powerful incentives.

On balance, we feel that nonpartisanship is more likely to be optimal if the following two conditions are satisfied: (*a*) either rewards (compensation or promotion) are provided by the decision maker herself and she can build a reputation for "fairness," so that information-based rewards are feasible, or inertia (which, recall, is more likely under advocacy) is very costly; *and* (*b*) the decision maker's goals can be made sufficiently congruent with the organization's (i.e., either the decision maker is the principal or the decision maker's honesty or explicit and implicit incentives align her interests with those of the principal), and thus the integrity of decision making is not a key issue. These conditions seem unlikely to hold in politics and law, which may explain why advocacy is paramount.

Finally, the preliminary applications to comparative legal systems and to the organization of Congress, as well as the list of open topics drawn in the previous section, suggest that further research on advocacy should be fruitful.

Appendix A

Foundations of Decision-Based Rewards

Suppose that the decision maker must decipher the information collected by the agent(s).[31] Suppose further that the decision maker (*a*) differs from the principal and (*b*) does not respond to monetary incentives (is very risk averse). The only determinant of the decision maker's behavior is then career concerns. The decision maker is "bright" with a high probability and "dumb" with a low probability, where "bright" refers to the decision maker's capacity to understand the meaning of the pieces of evidence collected by the agent(s) (i.e., to find the "deciphering key" described in n. 31). Thus the decision maker is driven by the desire to demonstrate intelligence and makes the decision that is best for the principal given the evidence. On the other hand, there is no mechanism that distinguishes between the two situations in which there are zero and two pieces of evidence, since the distinction between the two is payoff-irrelevant once the pieces of evidence

[31] Suppose that for each cause i there exists a latent realization of a random variable in $[0, 1]$. With probability $1 - \alpha$, this latent variable σ_i^* is equal to zero (no case); with probability α, σ_i^* is drawn from the uniform distribution on $(0, 1]$ (there exists a case for cause i). An agent always draws a signal σ_i in $(0, 1]$. If he exerts effort and there exists a case for cause i, he draws $\sigma_i = \sigma_i^*$ with probability q. In all other states of nature he draws σ_i from the uniform distribution on $(0, 1]$ (so σ_i and σ_i^* coincide with probability zero). Next, the decision maker (who is, a priori, more knowledgeable than the interest group) receives private signal 1 if $\sigma_i = \sigma_i^*$ and signal 0 if $\sigma_i \neq \sigma_i^*$. Then, even if σ_i is verifiable and contractible, writing contracts contingent on σ_i is useless.

have come out. (To complete the story, one must add that some observable signal that is correlated with the principal's payoff is revealed ex post, so that the decision maker indeed has career concerns. Furthermore, one must assume either that the agents themselves respond only to career concerns or that the commonly observed signal either is ex ante uninterpretable in the previous sense or is a sufficiently garbled version of the principal's welfare.)

Suppose by contrast that the decision maker fully internalizes the impact of the decision, say that the decision maker is the principal (this, a priori, makes the revelation of information easiest). Can one build a mechanism of revelation of preferences that mimics information-based rewards? We have analyzed this question from the point of view of implementation theory[32] and, for conciseness, content ourselves with listing the main conclusions.

a) There is a simple case in which, regardless of the number of agents, one cannot improve on the optimal decision-based reward with a more complex mechanism. Recall that a *necessary* condition for an allocation to be implementable is that it be payoff-relevant. That is, the implemented allocation must depend only on the von Neumann–Morgenstern preferences of the players at the message stage, and not on variables that no longer influence the players' preferences at that stage. At that stage, the agents' preferences are independent of what happened in the earlier stages (the agents care only about their wage w at this stage). Suppose further that $L_M = 2L_E$. Then, not only is the optimal decision the same (namely, the status quo) when receiving zero and two pieces of evidence, but the expected loss of not choosing the optimal decision (i.e., of embracing one of the two causes) is also the same. So the principal's preferences over all decisions are the same when there are zero and two pieces of evidence. Implementation theory then tells us that it is impossible to tell the two states apart. In particular, with a single agent, if w_A, w_B, w_0, and w_2 denote the agent's equilibrium wage when the agent finds one piece of evidence in favor of A or in favor of B, zero pieces of evidence, and two pieces of evidence, necessarily $w_2 = w_0$; therefore, one cannot improve on decision-based rewards.

b) Also regardless of the number of agents, one cannot improve on decision-based rewards with direct revelation mechanisms (i.e., mechanisms in which the decision maker and the agent announce only the state of nature) under the assumption that $L_M \geq 2L_E$.

c) Information-based rewards can be subgame implemented (see Moore and Repullo 1988) whenever $L_M \neq 2L_E$. It should be noted, though, that

[32] A *mechanism* specifies a decision and monetary transfers as functions of messages sent by the decision maker and the agent(s). (We could also let the mechanism depend on the pieces of evidence released to the decision maker. To avoid this, we can assume either that they are not verifiable or else, as in n. 31, that they are not ex ante interpretable [the deciphering key is missing].) The timing is as follows: (1) The number of agents (one or two) is selected and a mechanism is set up. (2) The agents investigate. (3) The decision maker receives the pieces of evidence, if any. (4) The parties play the mechanism, i.e., send messages.

even then information-based rewards do not dominate decision-based rewards for the optimal choice of number of agents (see proposition 1). Furthermore, the mechanisms used to obtain information-based rewards are very sensitive to variations in the modeling. For instance, if the principal has ex ante or ex post private information about her payoff, the optimal incentive scheme under advocacy and the efficiency of this scheme (which is decision-based) are unchanged whereas information-based rewards (which rely on the elicitation of the differences in the principal's payoffs for inefficient decisions with zero and two pieces of evidence) become harder to construct. Having two agents then strictly dominates having one even when $L_M \neq 2L_E$ and the decision maker fully internalizes the principal's welfare.[33]

Appendix B

Career Concerns

This Appendix develops more formally the career concerns model of Section III*B*. Assume that agents do not respond to monetary incentives; they are infinitely risk averse and receive constant wage $w = 0$, say. They have career concerns à la Holmström (1982*a*). Each agent is characterized by a probability q of unveiling information favorable to any cause i (conditional on incurring disutility K and on $|\theta_i| = 1$). The difference with Section III*A* is that q is no longer deterministic. There is ex ante symmetric information about type q. Neither the agent nor the organization knows the agent's type, which is drawn from a distribution on [0, 1]. Let $f(x)$ denote the density of the variable $x \equiv \alpha q$ on $[0, \alpha]$ (where α is the probability that there exists information favorable to cause i). The expectation operator $E[\cdot]$ will refer to this distribution. As earlier, we assume that an agent who shirks learns nothing, regardless of his type.

After the decision d ($d \in \{A, B, 0\}$) is chosen in what is now a "first period," the labor market (or electorate) observes the decision (but, again, not the information on which this information is based). The labor market updates its beliefs about the agent's type q into some posterior distribution. The agent's "second-period" job or task assignment or probability of being reelected (according to the context) depends on these posterior beliefs.[34] We can very generally denote by $w(d)$ the expected surplus (private benefit) received by the agent in the second period. We realistically assume that more favorable beliefs about talent (in the sense of first-order stochastic dominance) yield a higher expected surplus to the agent.

[33] An alternative and promising route toward an understanding of why information-based rewards are difficult to construct would be to introduce the possibility of collusion between decision maker and agents. We have not explored it.

[34] For simplicity, we assume that the organization does not internalize the social value of learning the agents' types. For instance, it is a private organization, which will not rehire the agents in the future. Our analysis could clearly be extended to allow the organization to care about learning the types.

Let δ denote the discount factor between the two periods, so $\delta w(d)$ is discounted expected surplus. We allow $\delta \in [0, \infty)$, because δ reflects not only time impatience but also the relative importance of the second-period job assignment relative to the first-period disutility of effort. So δ parameterizes the strength of career concerns.

Let us look for conditions for full information collection with one and two agents.[35]

A. *Single Agent (Nonpartisanship)*

Suppose that the agent investigates both tasks. By symmetry, the labor market's posterior beliefs are the same for decisions A and B. Let $w \equiv w(\mathrm{A}) = w(\mathrm{B})$. And let $w_0 \equiv w(0)$. Incentive constraints (1) and (2) become

$$E[x(1 - 2x)]\delta(w - w_0) \geq K \tag{B1}$$

and

$$E[x(1 - x)]\delta(w - w_0) \geq K. \tag{B2}$$

The incentive constraints much resemble those under monetary incentives except for the introduction of expectations. We see that full information collection by a single information collector is infeasible if $E[x(1 - 2x)] \leq 0$. When $E[x(1 - 2x)] > 0$, full information collection is feasible if and only if $\delta \geq K/\{E[x(1 - 2x)](w - w_0)\}$.

B. *Two Agents (Advocacy)*

Suppose that two agents with independent types investigate one cause each. Let $\hat{w}$ denote the expected surplus of an agent when the cause he was defending is supported, $\hat{v}$ his expected surplus when the opposite cause is supported, and $\hat{w}_0$ his expected surplus when the status quo prevails. Clearly, $\hat{w} > \hat{w}_0 > \hat{v}$. The agent's incentive constraint is

$$E[x]\{E[x]\delta(\hat{w}_0 - \hat{v}) + [1 - E[x]]\delta(\hat{w} - \hat{w}_0)\} \geq K. \tag{B3}$$

C. *Comparison*

Suppose that career concerns are sufficiently strong, so that there is full information collection with one or two agents. Which is best for the organization? The difference between the two organizational forms under monetary incentives was a lower wage bill under an advocacy system. Under pure career concerns the wage bill is identical (zero in both cases). But a new effect steps in. The probabilities of the two types of error were the same with one or two agents in a pure moral hazard framework. Here the addition of adverse selection creates a discrepancy in the probabilities of one type of error.

[35] For conciseness, we do not write the (slightly modified) versions of assumptions 1 and 2 for the career concerns model. Let us just note that they differ a bit depending on whether there is one or two agents.

Suppose first that decision A, say, is optimal under full information. Then the conditional probability of inertia and concomitant loss L_I for the organization is the probability $1 - E[q]$ that the agent in charge of cause A does not collect the relevant information, regardless of whether this agent is also in charge of cause B. Second, suppose that $|\theta_A| = |\theta_B| = 1$, so the status quo is optimal. The conditional probability of extremism and concomitant loss L_E for the organization is $2E[q]E[1 - q]$ with two agents and $2E[q(1 - q)]$ with a single agent. Because q and $1 - q$ are negatively correlated,

$$E[q(1 - q)] < E[q]E[1 - q].$$

So an advocacy system creates a higher risk of undue extremism, and therefore it is optimal for the organization to employ a single agent.

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