# Transparency
# in organization

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When is it best for the Principal to commit not to disclosing every piece of information she may have to the agent in moral hazard interactions ? I show that whenever there exist at least two distinct states in which the agent would choose the same action in the complete information benchmark, then **full transparency can be improved upon**. It is suggested that such situations are common, and the optimal way of remaining silent is characterized in the context of a simple moral hazard interaction in which the state is parameterized by how difficult the task is and how good the monitoring technology is.

### INCENTIVES AND INFORMATION IN ORGANIZATIONS

Transparency is an issue in a variety of contexts. **In public life** a central question is how much information a public official (the Agent) should disclose to the citizens (the Principal). The objective is to secure public accountability e.g., to prevent corruption. In contrast, **within organisations** an important issue of information disclosure relates to the manager's (the Principal's) choice of how much information he reveals to his employee (the Agent). A central question of economics is about how to provide the best incentives to agents in an attempt to improve the working of organizations. Most of the literature in contract theory concerned with this question has focused on how to use monetary instruments. But, an equally important design question concerns the distribution of information in organizations insofar as information affects the perceived consequences of actions and thus the incentives of agents.

### THE APPROACH

Consider a **Principal-agent relationship** in which the agent must exert some effort so as to increase the chances of success of the task. The Principal does not observe effort directly, and she is informed at the time the task is to be completed about how difficult it is to achieve a successful outcome and how noisy it is to measure success in a reasonable time scale where the agent is assumed to enjoy some exogenously set bonus in case a positive signal about success is received ex post by the Principal.

**A possible disclosure policy** that I refer to as full transparency requires that the agent be informed prior to making his effort decision about the monitoring technology in the hands of the Principal and how difficult the task is. Alternative less transparent disclosure policies would require that some aspects of the information held by the Principal be kept unknown to the agent, as least until the completion of the task. The question studied in this paper is **whether full transparency should be expected to be the disclosure policy that is most preferred by the Principal in such situations.**

### FULL TRANSPARENCY FROM THE PRINCIPAL IS GENERICALLY NOT OPTIMAL FOR MONITORING

In situations like the moral hazard one just described in which **the information held by the Principal varies over more dimensions than the action of the agent**, full transparency is not the optimal disclosure policy **no matter what the exact functional forms describing the preferences, costs, physical and monitoring technologies are**. It should be highlighted that the conclusion that full transparency is not optimal crucially relies on the possibility for the Principal to hide aspects that concern both the quality of the monitoring technology and the difficulty of the task, and it would not necessarily hold if the information held by the Principal were restricted to the quality of the monitoring technology.

Specifically, I consider the transparency question in the context of the following general abstract model. An agent is engaged in a moral hazard interaction parameterized by a state $\theta$. He must choose an action $a$. Both the state $\theta$ and the action $a$ can be varied locally. In state $\theta$, action $a$ results in an expected payoff $u(a; \theta)$ to the agent and an expected payoff $\pi(a; \theta)$ to the Principal (or the organization). Full transparency would require that the agent be fully informed of the state $\theta$ before making his choice of action $a$. The question I am interested in is whether other less transparent disclosure policies could not be preferable for the organization. Or to put it differently, whether in expectation the Principal cannot achieve a better outcome (from the viewpoint of the organization) by having the agent be incompletely rather than completely informed of the state $\theta$. In addressing the above transparency question, I have in mind that the choice of disclosure policy is made at an ex-ante stage and thus does not signal anything about which $\theta$ is being observed by the Principal in the current interaction of interest. I believe such a scenario fits in well with the application to organizations in which due to a constant flow of new pieces of information the design of how information is distributed is better thought of from an ex ante perspective.

## MAIN RESULTS

The main result of this paper can be stated as follows. **For generic organizational objectives, the Principal can do strictly better than full transparency** by remaining silent over a well chosen subset of states, as long as there exist at least **two distinct states such that the action of the agent would be the same at these two states in the fully transparent benchmark**. Importantly, the same non-transparency result extends to situations in which in addition to the disclosure policy, the Principal can use monetary instruments to incentivize the agent (as most of the contract theory assumes) and to situations with more than one agent, covering applications such as moral hazard in teams. I also illustrate in the moral hazard example that the gains over full transparency can be arbitrarily large in relative terms.

## PRACTICAL IMPLICATIONS

The analysis allows characterizing when **the Principal should optimally remain silent** about the state in the context of the same leading example. In short, I show that the Principal should optimally remain silent when, on the one hand, **the task is easy and the monitoring technology is poor** and, on the other hand, when **the task is difficult and the monitoring technology is good,** thereby giving a precise sense of how the disclosure about the two dimensions of the state should be optimally combined in this application.

References

Kamenica, E. and M. Gentzkow (2011): *"Bayesian persuasion"*, American Economic Review, 101, 2590-2615.

Rayo, L. and I. Segal (2010): *"Optimal information disclosure"*, Journal of Political Economy, 118, 949-987.

Tamura, W. (2012): *"A theory of multidimensional information disclosure",* mimeo 40