LAST WORD

Bengt Holmstrom and Contract Theory

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In December, MIT professor **Bengt Holmstrom** was awarded the Nobel Prize in Economics, which he shares with Professor **Oliver Hart,** for their work on contract theory. In the words of the committee that recommended them for the prize: “An eternal obstacle to human cooperation is the fact that people have different interests. In modern societies, conflicts of interest are often relieved – if not completely resolved – with contractual agreements. Well-designed contracts offer incentives to the parties that make it possible to reap the potential rewards of collaboration.”

Both from the perspective of the markets and from that of organizations, this contractual issue is tremendously important. Any manager knows the difficulty of aligning interests and efforts in order to meet the organization’s shared objectives. Contract theory shines a light on this problem, and it has had great impact on areas such as business economics and corporate finance.

I am honored to have been the first doctoral student of Professor **Holmstrom.** His work centers on incentives in what we call complete contracts. In particular, the classical contractual problem goes like this: the “principal” charges the “agent” with tasks that are in her interest. However, the principal cannot observe directly how the agent carries out the tasks, and she can only compensate the agent according to the outcome. At the same time, the agent’s actions involve an effort that he alone must make, and the outcome depends not only on his effort but also on unpredictable factors. Therefore, given a specific outcome, we can’t be sure how much is due to the effort expended and how much is due to chance. This pattern is present in many everyday situations. For example, the principal could be the shareholders, and the agent could be the CEO of a company. Or the principal could also be a patient that puts herself in the hands of a doctor (agent) or a driver that takes his car to a mechanic (agent).

Something else that Professor **Holmstrom** tries to understand is how to align the agent’s incentives most efficiently under a variety of conditions. What do optimal contracts look like in these situations? What is the value of information in their structure? What does their specific form tell us? All of these questions are crucial for understanding how to achieve the level of coordination necessary for the most efficient solution.

Work “on incentives” has sometimes been demonized or criticized for being based on a too narrowly economic view of the person. This criticism reflects a superficial understanding of the true contribution of the models. Instead of offering simple solutions to complex problems, they grapple with complexity in order to improve decision-making.

This is seen most clearly when the theory is applied to specific situations. For example, what should contracts look like when the agent will carry out multiple tasks? What’s the best way to incentivize teams? How can we make an upper manager’s investment decisions compatible with her interest in advancing her career, when these decisions, beyond company outcomes, are themselves signs of her management talent? The lesson of this model is not a precise rule. Rather, it recognizes that such conflicts of interest can be present in many situations and proposes efficient solutions to the problem.

Thanks to the work of **Bengt Holmstrom,** we have a better understanding of the complexity of incentives in organizations. As always, what we do with this knowledge continues to be up to management.