

Is Public Talk Always Better? Cheap-talk with Interacting Decision-makers under Two Communication Protocols

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1 Long Abstract

Interactions between big powers within large international organizations always capture people's attention. A good illustration is China's strategic communication with US and other western countries after it joined the World Trade Organization. During the first few years of its membership when called upon to provide information publicly to all WTO members, China showed great reluctance. Situation got better after 2006, when some "strategic economic dialogues" were set up between Washington and Beijing. This bilateral agreement allows China to meet with the United States privately and periodically, rather than to face all western countries publicly and simultaneously. Since then China is more willing to share its information with the US, on its currency, labor, environmental, and many other issues, as the talks become more private, sometimes "secret."

The above story roughly depicts how a typical agent in an organization shares more information when the communication environment changes. Strategic communication under incomplete information has become one of the central issues in recent organization design literatures. Imperfectly informed decision-making principals usually have to seek advice from a better-informed agent. However, the agent is thought to have his own most preferred action, not perfectly aligned with the principals. According to Crawford and Sobel (1982), potential tension between the agent and principals may result in coarse information provision, leaving principals inadequate knowledge to base their decisions on. For instance, inside the WTO, China speaks in a vague manner over issues where interests only partially align between itself, the US, and other European countries.

The agent's incentives are complicated when she faces a large audience of principals, each with one's own interest to pursue. Morris and Shin (2007) view the "approximate common knowledge" as a determinant in the agent's tradeoff between precision of messages and shared understanding

among principals. Meanwhile, besides public talk to the entire audience, the agent can also send private signal to each principal separately if “secret” meeting becomes available. Such private environment encourages the agent to share more information with one principal if their interests are much closer aligned; on the other hand, it also facilitates the agent to tell different lies to different audience members if interests diversify to a high extent. According to Farrell and Gibbons (1989), the agent’s informativeness with multiple decision-makers changes when she switches from public to private talk. Depends on interest alignment, public talk sometimes mutually disciplines the agent to reveal more than she would have done in private talk; in another case it subverts the very informative talk between the agent and one principal if they had talked privately. Goltsman and Pavlov (2010) extend the model to a more realistic continuous state space framework and derive general conditions for the existence of informative communication, both in public and private modes.

However, none of the previous literature takes into account the interaction between multiple principals. One specific interaction we focus on here is the organization members’ motivation to coordinate activities. In reality, a typical principal inside an organization develops twofold needs: to take an action appropriate to the underlying fundamental based on its own interest and to coordinate with another principal. As shown by Morris and Shin (2002), when every individual aims at adapting to the underlying state as well as the resemblance to the average, both public and private signals generate some “social values” among the vast audiences. Therefore, compared to the non-coordinating-principal circumstances studied in previous literature, the decision makers’ diverse interests in every state plus their coordinating motives complicate the tradeoff the agent faces with. To what extent should the speaker reveal the true state of the world? Should she send all signals publicly or talk to each principal separately via private messages? Should she maintain the critical “common knowledge” and “shared understanding,” or create asymmetry by differentiating the precision of the information among her listeners?

This paper addresses these questions by analyzing a cheap-talk communication between one informed agent and two coordinating uninformed principals. Each principal has his own ideal position, in the meantime wants to reduce the distance between his and the other’s action. To be general, we allow heterogeneous coordination concerns. In addition, the principals are ignorant about the true state of the world, so they must count upon the informed agent’s information revelation. The agent, who prefers both actions exactly coinciding with the underlying fundamental, communicates either publicly or privately via costless and non-verifiable messages. We compare the agent’s incentives with the prediction in a benchmark model, Goltsman and Pavlov (2010), in which principals do not interact at all. Anticipating the decision-makers’ coordination, how would the agent’s willingness of information provision change? Lower degree of interest conflict between the agent and two principals generally results in more precise signals, yet how would this vary

with different communication protocols, namely, public talk and private talk?

The major difference between the benchmark model and ours stems from principals' best responses incorporating their counterparts' decisions. On realizing that each one of her listeners' potential reaction enters the other's utility maximization problem, the agent also has to incorporate this interaction into her signaling problem, even though superficially her objective is solely to adapt to the current state. Our main results are as follows:

1. When the agent is bound to send only public signals that are commonly observable by both principals, equilibrium takes the partition form as described by Crawford and Sobel (1982). All types of agents within one partition element pool together by sending out only one message representing the interval where the true type lies in. The agent's willingness to provide more precise information changes non-monotonically with a principal's coordination concern, the pattern of which depends on this principal's relative bias. In other words, higher coordination needs from a principal whose interest conflicts less with the agent worsens the effectiveness of communication. This is because coordinating with somebody who stands further from the agent's ideal position undermines the agent's well-being.
2. When the communication is private, the agent sends separate messages to each principal secretly. She benefits from this increased flexibility in terms of having different numbers of partition elements. We show that in all cases with positive coordination needs, communication improvement exists, in terms of the agent's tolerance for more extreme bias of the principals, compared with Goltsman and Pavlov (2010). In the most extreme case of asymmetric revelation, i.e. the agent babbles with the more-highly-biased principal while talks informatively with the moderately-biased principal, who de facto take advantage of this asymmetry. Under this circumstance we find that effective communication exists under more extreme biases compared to the benchmark model.
3. Farrell and Gibbons (1989) and the benchmark model both emphasize the role of an additional principal in public communication. Two principals mutually discipline the agent's incentives in information revelation, even if there is no such revelation privately. Here we find similar communication improvement in private asymmetric communication, so long as at least one of the principal has the coordination concern. The agent transmits more information under the private protocol. Particularly, the agent wants to talk more precisely to one principal if she sends out completely uninformative signals to the other. Communication improvement exists under this private mode, within the parameter ranges that no public communication is non-trivial.