

“Hierarchical Bayesian Persuasion”

(in English)



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Abstract: We study the hierarchical Bayesian persuasion problem with a sender and a receiver through several intermediary, which extends the well-known work by Kamenica and Gentzkow [2011, AER]. The sender knows the true state and needs to persuade the receiver through intermediary under a given structure. An intermediary, once receiving the signal from the preceding intermediary (or the sender), needs to persuade the subsequent intermediary (or the receiver). After receiving the signal, the uninformed receiver chooses the action. Every player's payoff depends both on the state of the world and the action of the receiver. Our framework allows for both parallel persuasion and sequential persuasion, and any combination of the two. We show such a persuasion game has multiple equilibria but a unique outcome. On a given directed acyclic graph (DAG), we characterize the subgame perfect equilibrium for the optimal persuasion strategy. Real world examples of hierarchical Bayesian persuasion include job application processes, employee promotion, and legal proceedings.

Biography: Jie Zheng is Associate Professor in the Department of Economics and Executive Associate Director of the Tsinghua Economic Science and Policy Experimental Laboratory (ESPEL), School of Economics and Management, Tsinghua University. He is an Associate Editor for Journal of Economic Behavior and Organization and an Associate Editor for Research in Economics. Prof. Zheng received his Ph.D. in Economics from Washington University in St. Louis in 2011. His current research topics include rational bubbles, self-control, social preferences, reference-dependence, optimization in transportation systems and various topics on strategic interactions, experimental design and mechanism design. His research papers have been published in or accepted by journals including Nature Communications, American Economic Review (Papers and Proceedings), Games and Economic Behavior, Experimental Economics, and Journal of Economic Behavior and Organization. In 2016 and 2017, Prof. Zheng received "Young Scholar's Innovations Award on Information Economics in China" from China Information Economics Society.

All Are Welcome

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