The Costly Wisdom of Inattentive Crowds

Alexander W. Bloedel[*]   Ilya Segal[†]

August 2023

Abstract

Incentivizing the acquisition and aggregation of information is a key task of the modern economy (e.g., financial markets). We study the design of optimal mechanisms for this task. A population of rationally inattentive (RI) agents can flexibly learn about a common state of nature, subject to uniformly posterior separable (UPS) information costs. A principal, who aims to procure a given information structure from the agents at minimal cost, can design general dynamic mechanisms with report- and state-contingent payments. If the agents are risk-neutral, *prediction markets* implement the first-best. If the agents are risk-averse, *no* mechanism can approximate the first-best cost—not even those that harness the "wisdom of the crowd" by employing a large number of "informationally small" agents. This inefficiency derives from the *combination of* agents' moral hazard and adverse selection. Our characterization of incentive compatibility, which exploits an equivalence between proper scoring rules and UPS information costs, is tractable and portable to other design settings with RI agents (e.g., principal-expert and screening problems).

[*]Department of Economics, UCLA. Email: `abloedel@econ.ucla.edu`
[†]Department of Economics, Stanford University. Email: `isegal@stanford.edu`