

- Finite set of bidders, with different values for the good.
- Each bidder chooses a bribe and a bid.
- Principle has beliefs about the distribution of bids for each bidder,
- The principle chooses some threshold of skepticism, and a wage to pay the auctioneer.
- Auctioneer sees all bribes and bids. Announces a “winning” bidder and their bid to the Principle.

The principle behaves according to the following procedure: Observe the auctioneer’s announcement. If the probability of this outcome is below the threshold, the auction is nullified. All agents receive 0 utility.

Otherwise, the good is rewarded to the auctioneer’s declared winner, who must then pay the declared bid. They receive utility equal to (their valuation of the good - their bribe - the bid.) Auctioneer receives utility equal to the bribe of the winner plus the wage.

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If the threshold, wage, and beliefs of the Principle are publically known, then what is the optimal strategy (bids, bribes, announcement) for the other agents?

Given the above, can the Principle’s choice of wage minimize the probability of an auction being nullified?

If the Principle is benevolent and wants to maximize the total utility of all other agents, how skeptical should they be, and how much should they pay the auctioneer?