

## **Allocation Mechanisms with Mixture-Averse Preferences**

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*Abstract* :

Consider an economy with equal amounts of  $N$  types of goods, to be allocated to agents with strict quasi-convex preferences over lotteries. We show that ex-ante, all feasible and Pareto efficient allocations give almost all agents binary lotteries. Therefore, even if all preferences are the same, some identical agents necessarily receive different lotteries. Our results provide a simple criterion to show that many popular allocation mechanisms are ex-ante inefficient. Assuming the reduction of compound lotteries axiom, social welfare deteriorates by first randomizing over these binary lotteries. Efficient full ex-ante equality is achieved if agents satisfy the compound independence axiom.