# Feasible Joint Posterior Beliefs

ITAI ARIELI, Technion, Israel
YAKOV BABICHENKO, Technion, Israel
FEDOR SANDOMIRSKIY, Technion, Israel and Higher School of Economics, Russia
OMER TAMUZ, Caltech, United States

We study the set of possible joint posterior belief distributions of a group of agents who share a common prior regarding a binary state and who observe some information structure. Our main result is that, for the two agent case, a quantitative version of Aumann's Agreement Theorem provides a necessary and sufficient condition for feasibility. For any number of agents, a related "no trade" condition likewise provides a characterization of feasibility. We use our characterization to construct joint belief distributions in which agents are informed regarding the state, and yet receive no information regarding the other's posterior. We study a related class of Bayesian persuasion problems with a single sender and multiple receivers, and explore the extreme points of the set of feasible distributions.

The full paper can be accessed at https://arxiv.org/pdf/2002.11362.pdf.

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