

Feasible Joint Posterior Beliefs

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CCS Concepts: • **Theory of computation** → **Convergence and learning in games**; *Market equilibria*.

Additional Key Words and Phrases: Bayesian updating; Bayesian games; Bayesian persuasion; splitting lemma; no-trade theorem; extreme points; social learning; joint distribution; belief hierarchy

ACM Reference Format:

Itai Arieli, Yakov Babichenko, Fedor Sandomirskiy, and Omer Tamuz. 2020. Feasible Joint Posterior Beliefs. In *Proceedings of the 21st ACM Conference on Economics and Computation (EC '20), July 13–17, 2020, Virtual Event, Hungary*. ACM, New York, NY, USA, 1 page. <https://doi.org/10.1145/3391403.3399505>

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>.

ACKNOWLEDGMENTS

The paper greatly benefited from multiple suggestions and comments of our colleagues. We are grateful (in alphabetic order) to Kim Border, Laura Doval, Sergiu Hart, Kevin He, Aviad Heifetz, Yuval Heller, Matthew Jackson, Benny Moldovanu, Jeffrey Mensch, Alexander Nesterov, Michael Ostrovsky, Thomas Palfrey, Luciano Pomatto, Marco Scarsini, Eilon Solan, Gabriel Ziegler, and seminar participants at Bar-Ilan University, Caltech, HSE St. Petersburg, Technion, Stanford, and UC San Diego.

Itai Arieli is supported by the Ministry of Science and Technology (#2028255). Yakov Babichenko is supported by a BSF award (#2018397). Fedor Sandomirskiy is partially supported by the Lady Davis Foundation, by Grant 19-01-00762 of the Russian Foundation for Basic Research, by the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation program (#740435), and by the Basic Research Program of the National Research University Higher School of Economics. Omer Tamuz is supported by a grant from the Simons Foundation (#419427) and by a BSF award (#2018397).

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EC '20, July 13–17, 2020, Virtual Event, Hungary

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ACM ISBN 978-1-4503-7975-5/20/07.

<https://doi.org/10.1145/3391403.3399505>