

TITLE: Pooling as a Bayesian update: relations with Condorcet and Aumann

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Opinion pooling offers a natural way to accommodate the opinions of others. This paper relates pooling to two other models of epistemically interacting agents, in particular Condorcet's jury theorem and Aumann's agreement theorem. Specifically, a Bayesian representation of pooling allows us to identify the trust parameter from pooling with the so-called truth-conduciveness of jurors. Furthermore, it can be shown that consensus based on iterated pooling coincides with a series of Bayesian updates in an Aumann structure. The iterated exchange of probabilistic opinions from pooling can thus be viewed as an approach to common knowledge. Particular attention will be given to the relations between categorical and probabilistic beliefs, as they show up in the two contexts.