

Jury Theorems

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Abstract: Jury theorems are mathematical theorems about the ability of collectives to make correct decisions. Several jury theorems carry the optimistic message that, in suitable circumstances, ‘crowds are wise’: many individuals together (using, for instance, majority voting) tend to make good decisions, outperforming fewer or just one individual. Jury theorems form the technical core of epistemic arguments for democracy, and provide probabilistic tools for reasoning about the epistemic quality of collective decisions. The popularity of jury theorems spans across various disciplines such as economics, political science, philosophy, and computer science. This entry reviews and critically assesses a variety of jury theorems. It first discusses Condorcet's initial jury theorem, and then progressively introduces jury theorems with more appropriate premises and conclusions. It explains the philosophical foundations, and relates jury theorems to diversity, deliberation, shared evidence, shared perspectives, and other phenomena. It finally connects jury theorems to their historical background and to democratic theory, social epistemology, and social choice theory.

Link to publication: <https://plato.stanford.edu/entries/jury-theorems/>