Reliable Methods of Judgment Aggregation

Hartmann, Stephan and Pigozzi, Gabriella and Sprenger, Jan (2007) Reliable Methods of Judgment Aggregation.

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Abstract

The aggregation of consistent individual judgments on logically interconnected propositions into a collective judgment on the same propositions has recently drawn much attention. Seemingly reasonable aggregation procedures, such as propositionwise majority voting, cannot ensure an equally consistent collective conclusion. The literature on judgment aggregation refers to such a problem as the discursive dilemma. In this paper we assume that the decision which the group is trying to reach is factually right or wrong. Hence, the question we address in this paper is how good the various approaches are at selecting the right conclusion. We focus on two approaches: distance-based procedures and Bayesian analysis. Under the former we also subsume the conclusion- and premise-based procedures discussed in the literature. Whereas we believe the Bayesian analysis to be theoretically optimal, the distance-based approaches have more parsimonious presuppositions and are therefore easier to apply.

Keywords:	Collective decision theory, judgment aggregation, discursive dilemma
Subjects:	Specific Sciences: Probability/Statistics General Issues: Decision Theory General Issues: Confirmation/Induction Specific Sciences: Economics
ID Code:	3593
Deposited By:	Hartmann, Stephan
Deposited On:	17 October 2007