Comment on Article by Albert et al.

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1 Comment

This is a very thought provoking paper that takes forward the combination of disparate expert judgements in a very useful way. I congratulate the authors in developing a Bayesian way of tackling the issues in a domain that has been dominated by averaging and pooling approaches for so many years. My comments below concern the conceptualisation of the issues.

The authors assert that their approach can "underpin aggregation of expert assessments in three broad contexts: the decision maker (DM) problem, the group decision problem, and the textbook problem." Perhaps, but it is not transparent that this is so for all three cases. Summarising the three contexts (French 2011):

- **The decision maker or expert problem.** In this a group of experts are consulted by a single decision maker who faces a specific decision and is not a member of the group. The decision maker alone is responsible and accountable for the decision. In this case the judgements that drive the ultimate decision making all belong to a single person, the decision maker¹.
- **The group decision problem.** The group itself is jointly responsible and accountable for the decision; they are also their own experts. They wish that, to the outside world, their decision appears rational and, possibly, also fair and democratic.
- **The textbook problem.** The group is simply required to give their judgements for others to use in future, undefined, circumstances. Thus the emphasis here is on reporting their judgements in a manner that offers the greatest potential for future use, but as yet there is neither a decision nor consequently any identified decision makers.

In all three cases, the combination of expert judgement is fraught with difficulty. If one takes a non-Bayesian approach one encounters inconsistencies between what at first sight seem reasonable principles to demand of the combination method, be it pooling, averaging or something else. The paradoxes that Arrow, Black, Condorcet and others have found in voting and social choice, that von Neumann and Morgenstern and others have found in non-zero sum games and that deny entirely convincing solutions to bargaining and arbitration problems despite valiant attempts by Nash and others also surface in non-Bayesian approaches to combining expert judgement (French 1986, 2007, 2011).

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 $^{^{1}}$ I originally termed this the expert problem; the authors refer to it as the decision maker problem.