



## Proposal Status | MAIN ►

**Organization:** Washington University

### Review #3

**Proposal Number:** 1152472  
**NSF Program:** Political Science  
**Principal Investigator:** Montgomery, Jacob  
**Proposal Title:** Collaborative Research on Ensemble Methods for the Prediction of Political Outcomes  
**Rating:** Very Good

### REVIEW:

What is the intellectual merit of the proposed activity?

This is largely a proposal to transfer technology from technical areas outside of political science (statistics and machine learning) to relatively non-technical researchers in political science. The basic ideas behind ensemble Bayesian model averaging (EBMA) are sound and, as the PIs demonstrate, EBMA can be used to generate very high quality forecasts of outcomes of interest to political scientists.

The authors are well-qualified to pursue this work. They both have experience working with complicated Bayesian models and they are in touch with many of the key people involved in developing EBMA in statistics.

What are the broader impacts of the proposed activity?

The broader impacts of this proposal are good. The PIs propose to develop and distribute open source software for ensemble Bayesian model averaging (EBMA) that is geared to the needs of researchers in political science. This is great and I have every reason to believe the software would be of high quality and that it would be used.

The PIs are also correct to note that improved forecasting methods can be of much use to political scientists and that more work on forecasting and predictive inference is a productive avenue of future research for political scientists. The PIs also claim that improved forecasting methods would be very valuable to policymakers and would make political science research more policy-relevant. I think there is truth to this claim although I think it is also important to distinguish between the ways in which forecasting is relevant for policymakers (being able to anticipate events largely outside of one's control) from the ways in which causal inference is relevant for policymakers (being able to infer the likely consequences of actions that are within one's control).

### Summary Statement

PI Ward has a good track record of producing very good scholarship with NSF support and this project fits squarely within his areas of expertise. Overall, this is a strong project that merits support if funds are available.

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