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# TESTING A PRECISE NULL HYPOTHESIS BY COMBINING EXPERIMENTS

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*Abstract:* The problem of combining experimental results to test sharp null hypotheses is considered from a Bayesian viewpoint. Relying on results of Berger and Sellke [8], lower bounds on the posterior probability of the null are obtained based on classes of priors. It is suggested that plots of these lower bounds, as functions of the prior probability, provide a useful summary of results for appraising evidence. An example involving the combination of experiments concerning the value of aspirin usage for heart attack patients is presented. The discussion includes comparison with classical $p$-values associated with meta-analysis.

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