

STAT 532

Name: _____

Philosophy and practice of Bayesian statistics

9/3/16

Read Andrew Gelman and Cosma Shalizi's *Philosophy and the practice of Bayesian statistics*. The paper is a little long, so the following questions are designed to focus your reading. This will not be turned in, but we will spend class time on Friday discussing these questions and any others that arise in your reading.

1. What are the schools of thought for classical and Bayesian statistics that the authors disagree with?
2. Explain what $P(\theta_k|y)$ means.
3. Describe what the authors are saying in the third paragraph of p. 13 "We found this not through any process of Bayesian induction ..."
4. What does $p(y^{rep}|y)$ mean?

5. What are the implications of the authors' belief that the prior distribution is a testable part of a Bayesian model?
6. On page 23, the authors state "we regard the prior and posterior as regularization devices..", what does this mean?
7. What do the terms induction, deduction, and hypo-deduction mean?
8. So what do we as statistical practioners take from this article?