

Philosophy 5311: Bayesian Epistemology
Homework 4
Due before class Wed, Nov 12th

Do the following problems from *Foundations of Bayesian Epistemology*

6.1, 6.2, 6.4, 6.9, 7.4, 7.5

In addition, do the following problem:

- 1) Let's say that for any O and H , O confirms H iff $P(H|O) > P(H)$ and O disconfirms H iff $P(H|O) < P(H)$. Prove the following:
 - a) O confirms H iff $P(H|O) / P(H|\sim O) > 1$
 - b) O confirms H iff $\sim O$ disconfirms H and O disconfirms $\sim H$.
 - c) Give an example (with numbers and a story where those numbers are reasonable) where according to the Law of Likelihood, O favors H_1 over H_2 , however, O disconfirms H_1
 - d) Give an example (with numbers and a story where those numbers are reasonable) where $P(H|O)$ is very high but O disconfirms H .

In addition, do one of the following two problems:

- 2) What is Goodman's 'New Riddle of Induction' and what is it supposed to show? Does it succeed?
- 3) Explain why on a subjective Bayesian model of confirmation, the Nicod Criterion is false. Hempel thought that while it this condition doesn't hold in general, it does hold in the case with only tautological background knowledge. What does he mean by this? Is he right about this claim?