

Philosophy of Probability: Reading Questions Week 1

Topic: History of Probability, The Classical Concept, and The Principle of Indifference

Readings: SEP. Introduction. Sections 1, 2, and 3.1; Suppes. Section 5.2. Pages 157-167

Reading Questions:

1. Give an example of Laplace's first principle (i.e. definition of probability), which requires "determining the number of cases favorable to the event whose probability is sought."
2. Why does Hajek think Laplace's definition is either a "category mistake" or "viciously circular"?
3. How does "principle of indifference" differ from Laplace's first principle? Why is the principle of indifference also circular according to Hajek?
4. Explain Suppes' assertion "suppose we are dealing with a coin that on the basis of considerable experience we have found to have a probability of .55 that in a standard toss a head will come up. It is obvious that there is no way of defining a Laplacean probability space . . . that will represent in a natural way the result of tossing such a coin twice."
5. Explain why Suppes claims, "For Laplace the universe is deterministic, and probability arises simply from our ignorance of the exact causes of events."
6. In your assigned readings, several different arguments are called "Bertrand's paradox." Explain in what way the paradoxes are similar and why they are understood to be objections to Laplace's definition.