

# STATISTICS AND PHILOSOPHY OF PROBABILITY

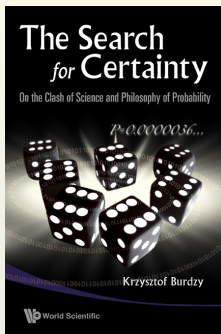
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## SIX DEGREES OF SEPARATION

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# The search for certainty

The search for certainty.  
On the clash of science and philosophy of probability.



Preface, Table of Contents and Introduction are available online (free download):

- ① <http://www.math.washington.edu/~burdzy/Philosophy/index.php>
- ② <http://www.worldscibooks.com/mathematics/7312.html>

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- ③ Bayesian statistics has nothing in common with the subjective philosophy of probability of de Finetti.
- ④ A few simple laws summarize well the science of probability.

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- ② Larry Wasserman: “Burdzy makes a convincing case that the philosophy of probability is a complete failure.”
- ③ Andrew Gelman: “Chris: I am in complete agreement with your claim that the theories of von Mises and de Finetti completely fail to describe what statisticians actually do.”



“Probability does not exist.”

Bruno de Finetti, the most prominent representative of the “subjective philosophy” of probability

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“We can say nothing about the probability of death [within a year] of an individual even if we know his condition of life and health in detail.”

Richard von Mises, the most prominent representative of the “frequency philosophy” of probability

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Consider testing of hypotheses in the context of scientific research. The tests have **nothing** in common except the significance level.

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De Finetti's ultimate failure: The Bayes Theorem does not eliminate any extra decision strategies.