

# Theoretical Justification for Ranking

- **Probability Ranking Principle** [Robertson 77]: Returning a ranked list of documents in descending order of probability that a document is relevant to the query is the optimal strategy under the following two assumptions:
  - The utility of a document (to a user) is **independent** of the utility of any other document
  - A user would browse the results **sequentially**
- Do these two assumptions hold?