Many Different Retrieval Models

- **Similarity-based models**: $f(q,d) = similarity(q,d)$
  - Vector space model
- **Probabilistic models**: $f(d,q) = p(R=1|d,q)$, where $R \in \{0,1\}$
  - Classic probabilistic model
  - Language model
  - Divergence-from-randomness model
- **Probabilistic inference model**: $f(q,d) = p(d \rightarrow q)$
- **Axiomatic model**: $f(q,d)$ must satisfy a set of constraints
- These different models tend to result in similar ranking functions involving similar variables