

What does probability mean?

The many faces of probability

Frequentist probabilities

- The probability of an event as the limit of its relative frequency in a large number of trials
- Probabilities describe objective properties of the physical world
- Probabilities only apply to repeated events

Cox probabilities

- Probability is an extension of formal logic, and allows us to discuss events about which we lack complete information
- Probabilities describe states of knowledge, not real properties of the world
- Probabilities apply to any statement for which we lack complete information