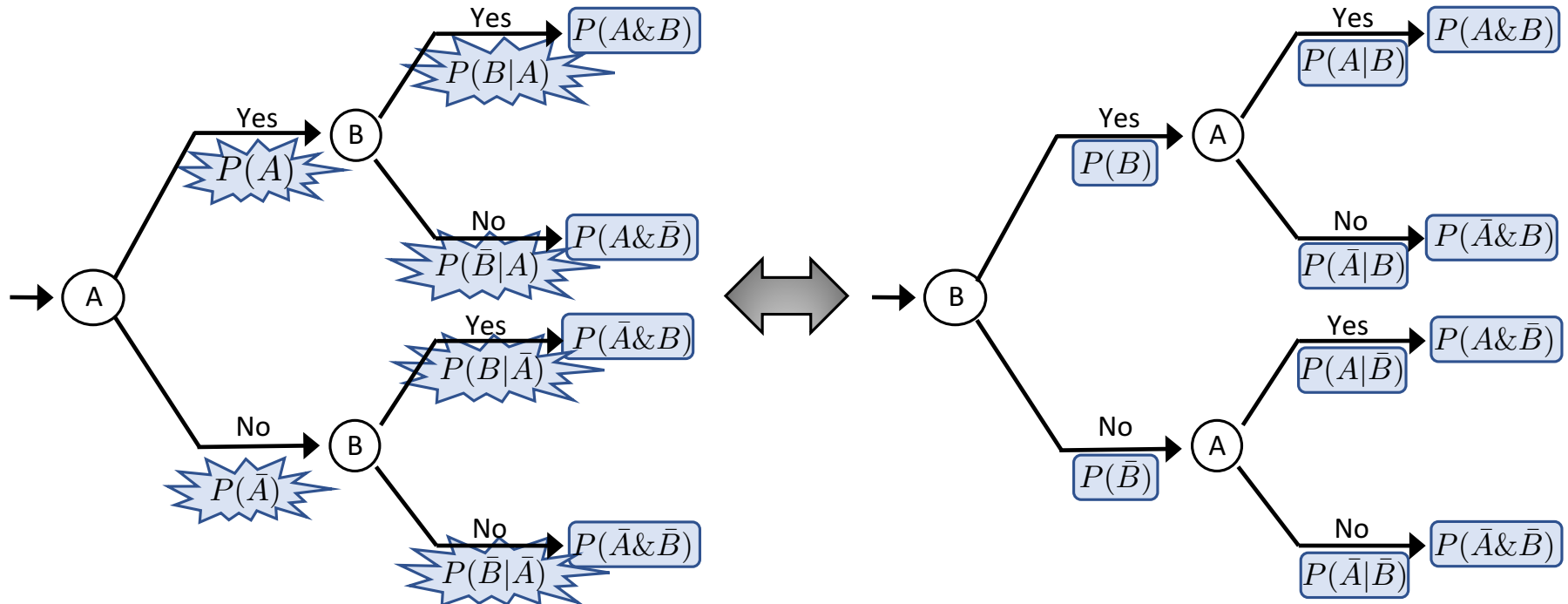


Application of Bayes Theorem

Informations in hand



Informations calculated



Calculations

$$P(A \& B) = P(B|A)P(A)$$

$$P(A \& \bar{B}) = P(\bar{B}|A)P(A)$$

$$P(\bar{A} \& B) = P(B|\bar{A})P(\bar{A})$$

$$P(\bar{A} \& \bar{B}) = P(\bar{B}|\bar{A})P(\bar{A})$$

$$P(B) = P(A \& B) + P(\bar{A} \& B)$$

$$P(\bar{B}) = 1 - P(B)$$

$$P(A|B) = \frac{P(A \& B)}{P(B)}$$

$$P(\bar{A}|B) = 1 - P(A|B)$$

$$P(A|\bar{B}) = \frac{P(A \& \bar{B})}{P(\bar{B})}$$

$$P(\bar{A}|\bar{B}) = 1 - P(A|\bar{B})$$