

$$P(A|B) = P(A|B^c)$$

$$P(A|B) = P(A) = P(A|B)P(B) + P(B^c|A)P(B)$$

$$P(A) = P(A)P(B) + P(B^c|A)P(B)$$

$$P(A) - P(A)P(B) = P(B^c|A)P(B)$$

$$P(A)(1 - P(B)) = P(B^c|A)(1 - P(B))$$

$$P(A) = P(B^c|A)$$

this is only possible when $0 < P(B) < 1$