females:	AA	AB	BB	
1 <sup>st</sup> gamete A				
male	1	0.5	0	0.5
female $P(A 2^{nd}   A 1^{st}) =$ $P(A 2^{nd} and A 1^{st}) / P(A 1^{st})$ (1 / 3) / (1 / 2) = 2 / 3 ( <i>i.e.</i> , 1/3 females possesses 2 As) ( <i>i.e.</i> , 3 / 6 A alleles)				





## **THOMAS BAYES**

## 1702-1761



reluctant minister (perhaps the impetus for theorem?); Tunbridge Wells, England published theorem in 1764 (by Price) *Essay towards solving a problem in the doctrine of chances* theorem was 'rediscovered' in the 1930s it is gradually infiltrating statistics it is revolutionising systematics and evolutionary biology

## **BAYES THEOREM**

 $P(H \mid d) = P(d \mid H) P(H) / P(d)$ 

P(d) = P(d | H) P(H) + P(d | ~H) P(~H)

http://www.stat.sc.edu/~west/javahtml/LetsMakeaDeal.html