Using the posterior

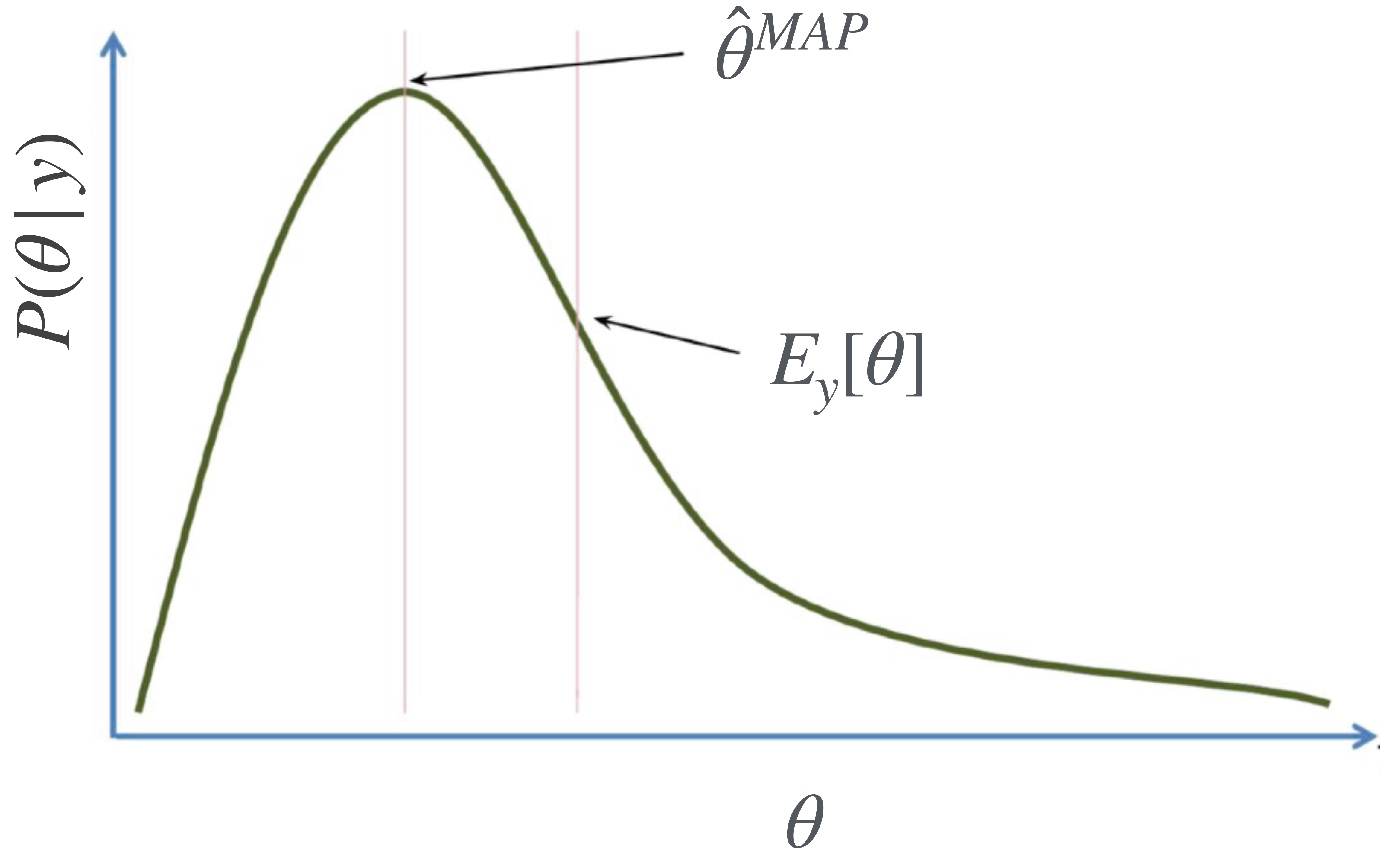
Posterior estimators

- Bayesian equivalent to MLE is the **M**aximum **A** **P**osteriori (MAP):

$$\boxed{\hat{\theta}^{MAP} = \underset{\theta \in \Omega}{\operatorname{argmax}} \left[P(\theta \mid y) \right]}$$

- The posterior mean is more common:

$$\boxed{E_y[\theta] = \sum_{\theta \in \Omega} \theta P(\theta \mid y)}$$



(Posterior median is also used occasionally.)