

WHY USE THE POSTERIOR?

• Allows to use probability in more contexts.

- $P(\theta|y)$ represents our knowledge of parameters using probability.

this representation fully encapsulates our beliefs.

- $P(\theta)$, the prior, can encode useful information.

parameter scale, shared structure, permitted values.

Isn't the MLE the best estimator? (depends on the criteria..)

- Sometimes... but not $\rho \equiv f(\hat{\theta})$

• Expands the range of models we can fit

WHY USE THE POSTERIOR?

- Allows us to use probability in more contexts.
- $P(\theta | y)$ represents our knowledge of parameters using probability.
 - this representation fully encapsulates our beliefs.
- $P(\theta)$, the prior, can encode useful information.
 - parameter scale, shared structure, permitted values...
- Isn't the MLE the best estimator? (depends on the criteria...)
 - Sometimes... but not $\rho = f(\hat{\theta})$
- Expands the range of models we can fit

USING THE POSTERIOR