Lecture 12: Analytical examples of Bayesian inference

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Credible intervals
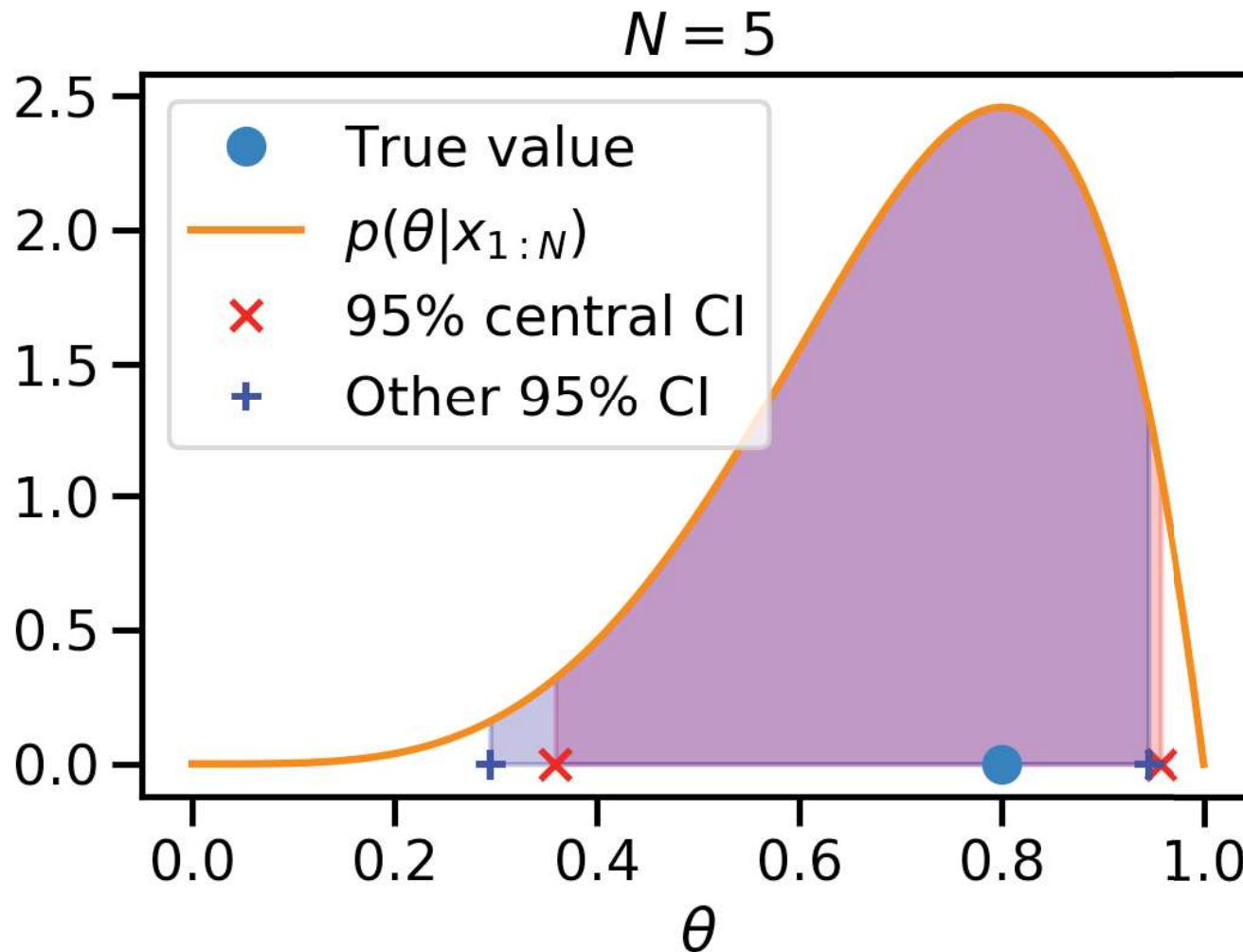
PREDICTIVE SCIENCE LABORATORY

Credible Intervals

Posterior
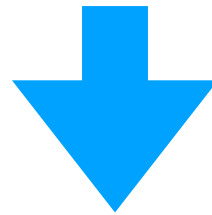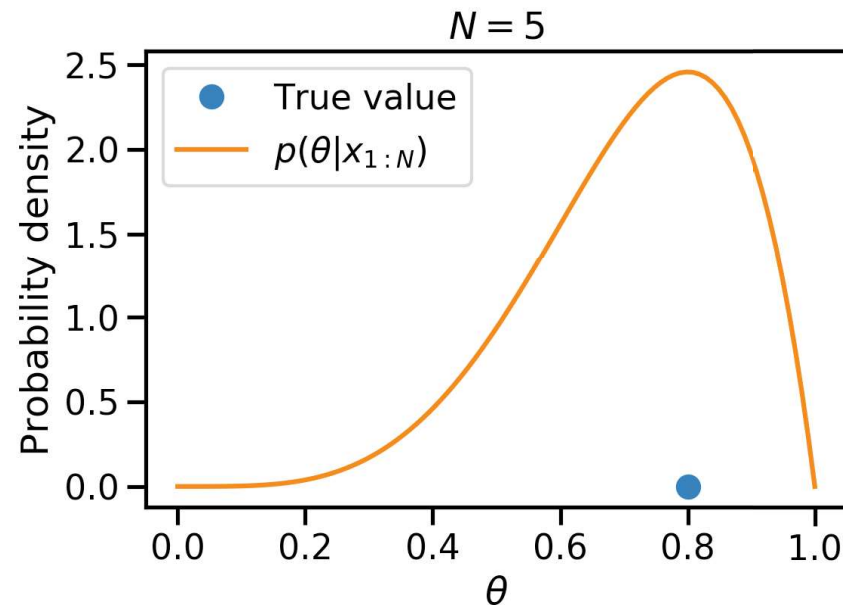
$$p(\ell \le \theta \le u \,|\, x_{1:N}) = 0.95$$

There are Many Credible Intervals

The Central Credible Interval

$$p(\theta \leq \ell \,|\, x_{1:N}) = 0.025$$
$$p(\theta \leq u \,|\, x_{1:N}) = 0.975$$

} **Also known as predictive quantiles**

$N = 5$

Legend:
- ● True value
- — $p(\theta|x_{1:N})$
- ✕ 95% central CI