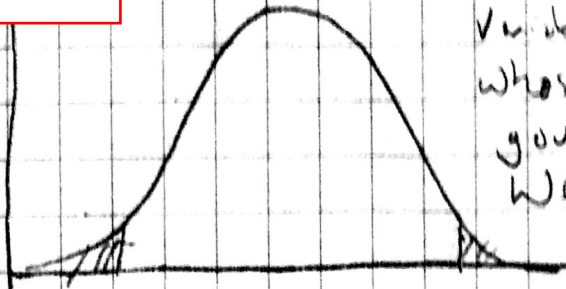


- Discuss 3 views:
- 1) many repetitions
  - 2) relative evidence
  - 3) random variables

# Bayesian Credible Interval

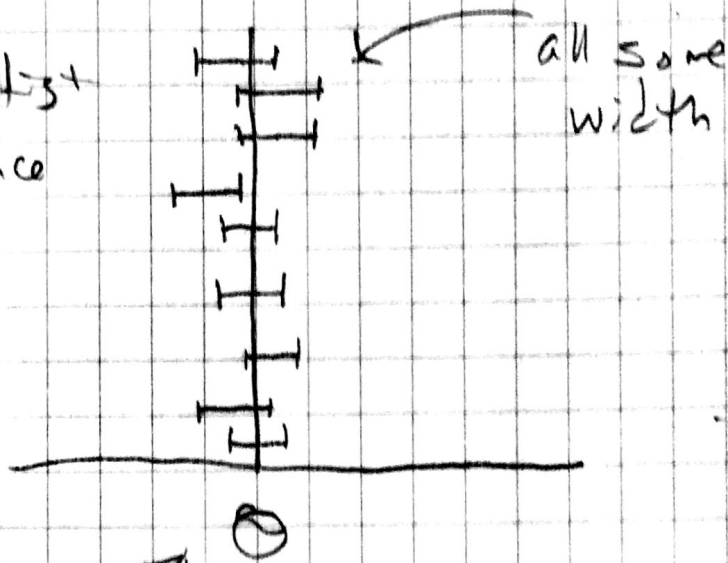
All unobserved quantities are treated as random variables. A random variable is a quantity whose behavior is governed by chance. We seek to understand the probability distribution controlling the behavior of these random variables.

$[y|\theta]$



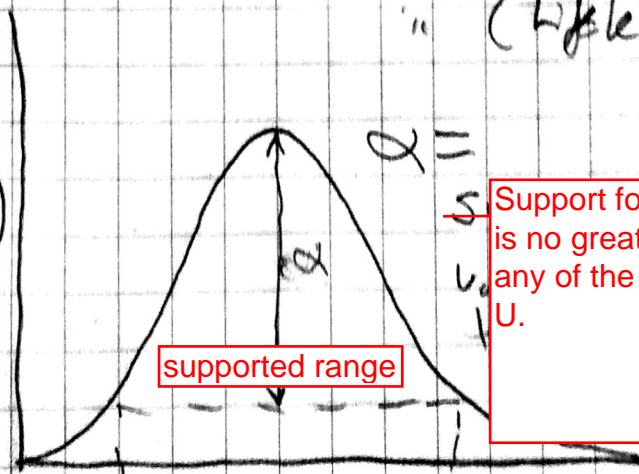
Random  $\theta$

Frequentist Confidence Interval



Fixed  $\theta$  Profile Confidence Interval  
" (Wald)

$\log([y|\theta])$



Support for the MLE value of  $\theta$  is no greater than  $\alpha$  relative to any of the values between L and U.

Fixed  $\theta$

alpha = 1.92 provides 95%

$$2 * \alpha \sim \chi^2_1$$