May 12, 2017

This time: statistical influence: internal estimation

Next time: " " "

Read: LN pp. L-~~131~~137 → L-160

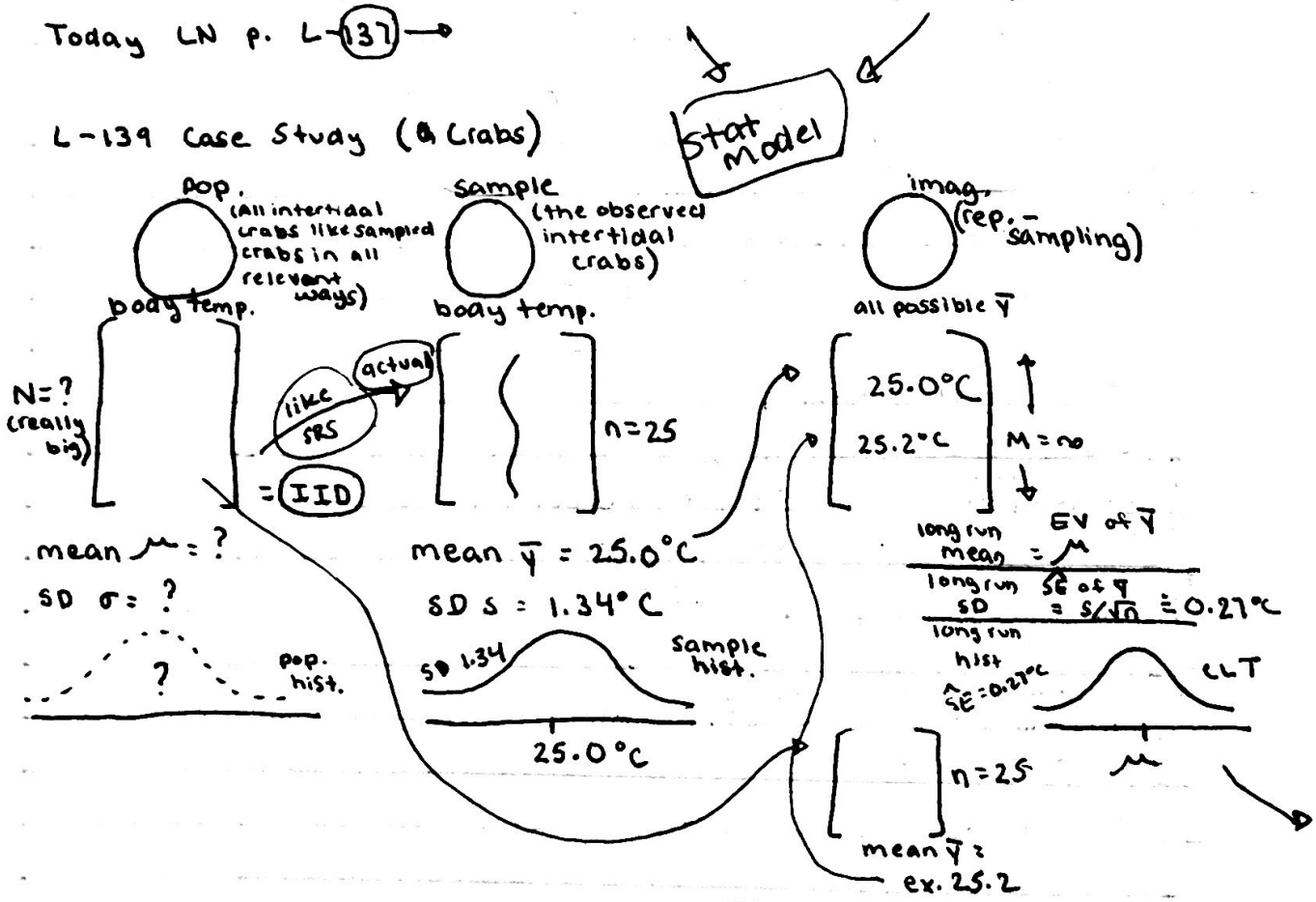
All official note-taker notes are on course web page

* New due date for midterm on canvas: Sunday night 11:59pm May 14th

HW #3 due date moved to May 22nd

Today LN p. L-137 →

L-139 Case Study (@ Crabs)

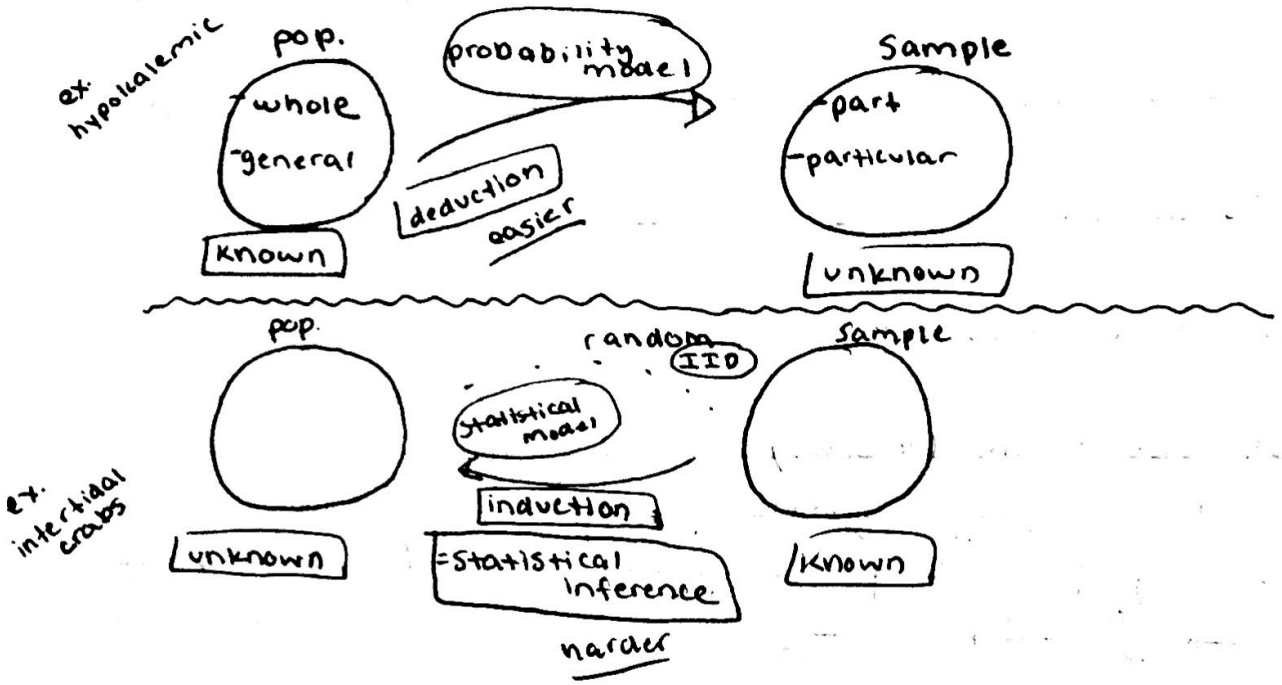


to ~~fr~~ define the pop data set with as much valid generality as possible, answer this

→

Q: what is the broadest scope of valid generalizability outward from your data set?

pop = what the sample would have looked ~~like~~ like if you had done ~~your~~ your experiment on a lot (N) more individuals than you did (n)



inferential Summary

unknown pop. quantity of main interest	μ = pop. means body temp after equilibrium
estimate of μ	$\bar{y} = 25.0°C$
give ~~on~~ or take for $\bar{y}$ as good estimate of μ	$\hat{SE}(\bar{y}) = 0.27°C$
interval for μ	

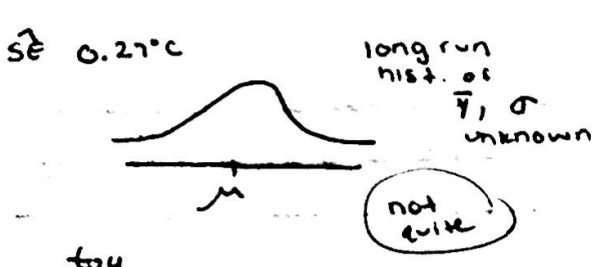
pop ← sample → Imag

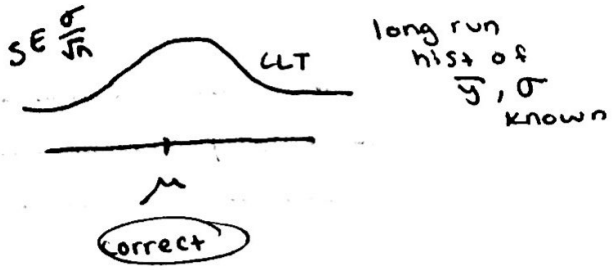
EV of $\bar{Y}$: $E_{IID}(\bar{y}) = \mu$ (math fact) read (R-22)

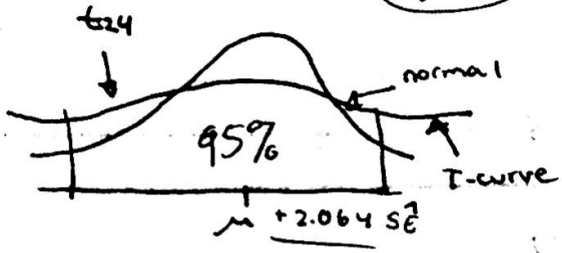
SG of $\bar{Y}$: $SE_{IID}(\bar{y}) = \frac{\sigma}{\sqrt{n}}$

Estimated SE of $\bar{Y}$: $\hat{SE}_{IID}(\bar{y}) = \frac{s}{\sqrt{n}}$ (estimate of)

$\frac{1.34°C}{\sqrt{25}} = \frac{1.34°C}{5} = 0.27°C$







long run hist. of $\bar{Y}$, accounting for uncertainty of σ

T curve, close to normal if n is large
↓ with (n-1) degrees of freedom

T table L-142

1.96 normal curve