

Q: What is Statistics About

* The Big Picture *

Main Question:

"We seek to know about a topic related to a Population"

ex: "Height of Male Students in U.S. Fraternities"



I

Sampling

sec 1.1 ch 1

• randomness is key
"Bad Sample - Bad Data"

A sample from the Pop.

IV Actually Inference results onto the population

Descriptive Statistics

II

- Shape of Distrib.
- width
- center
- location

ch 2

ch 3

Preparation for Inferential Statistics

IIIa

- Counting
- Probability
- Distributions of Data

IIIb

- Confidence Intervals
- Hypothesis Testing

to avoid bias in the survey

Why probability? Since sampling involves randomness, we still have a chance that we collected data on only the mid-sized college Fraternity males, or only tall male students, etc.

{ Not necc'y Bias, but rather just chance } Such will not describe the population!!

So we ask: "what is the probability our sample is bad?"