

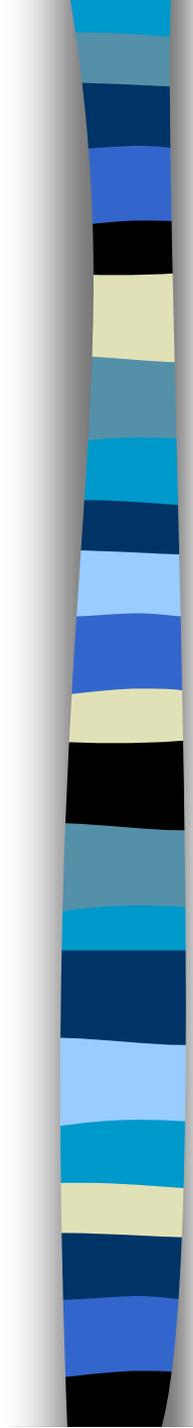
Introduction to Statistics Lecture



Cecil H. McManus, Ph.D.

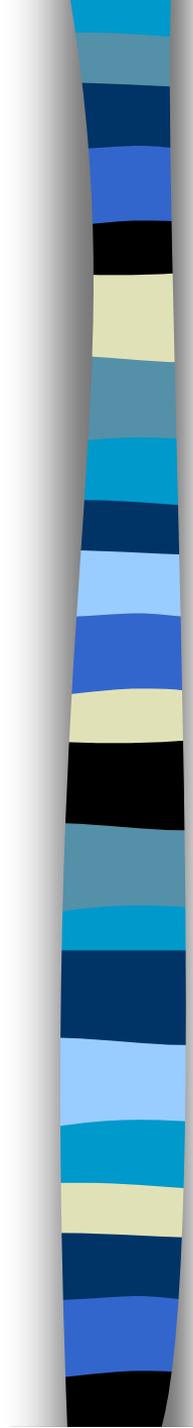
Professor of Psychology

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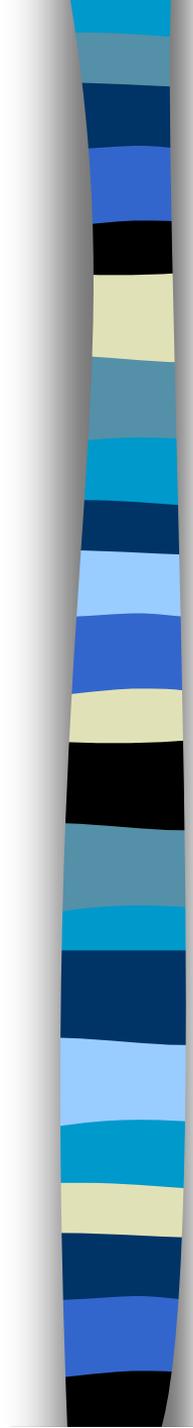
Statistics

A branch of mathematics that deals with the collection, organization, and analysis of numerical data and with such problems as experiment design and decision making.



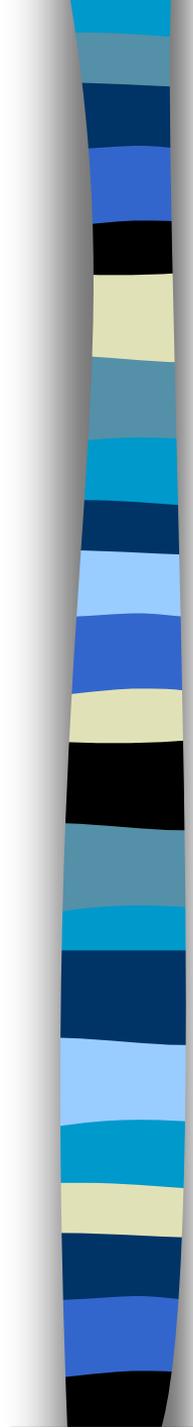
The raw materials of statistics

- Sets of numbers obtained from enumerations or measurements
- Collect statistical data
- Take adequate precautions to secure complete and accurate information
- We take from N to make n
- We make assumptions on N based on n



$N = \text{Population (All)}$

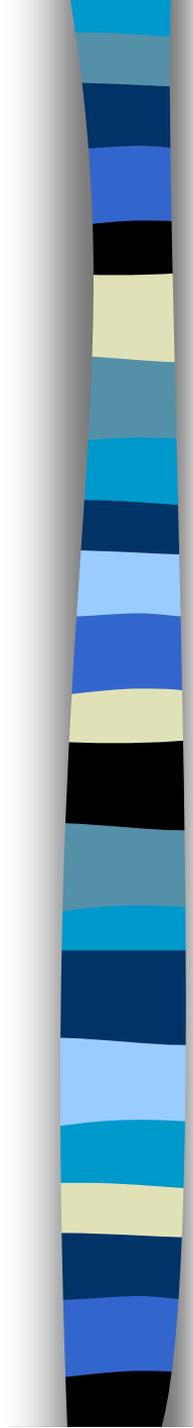
$n = \text{Sample (A selection)}$



How we look at things

■ Descriptive Statistics

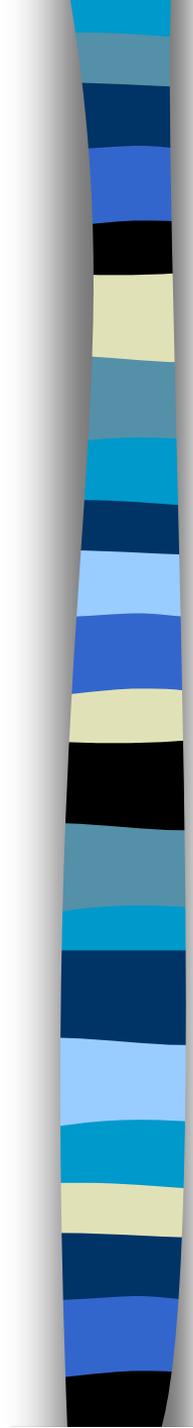
- Central tendency
- Variability
- Frequency distribution
- Histogram
- Pie Chart



What we assume about things

■ Inferential Statistics

- Assumptions about N based on n
- Probability
- Alpha (.05, .01 or .001)
- Type I or Type II errors
- Central limit theorem



Go back over this presentation and make sure you understand the facts. Look up what you do not understand prepare for me to question you like it is 1999!