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## Notice

Pictures are omitted to save color ink for students and when permission is not provided for web viewing without a password access.

By attending class, you will see the pictures & can describe them in your own notes.

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## What are the Goals of Psychology?

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## What is Psychology vs. Pseudo?

1934 Century of Progress Exhibition in Chicago \$200,000

Phrenology - Franz Gall (1758-1928)

Mental Abilities on surface & visible "Use it or Lose It"

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## How is Research Conducted?

Naturalistic Observation

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## Natural Experiments

- Nature manipulates the I.V.
  - Columbine
  - Sept 11<sup>th</sup>
  - Hurricane Katrina
- Problems
  - Can't be replicated
  - Can't Generalize always?

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## Research Concepts

- Who Are the Subjects? Does this matter?
- What are the Groups?
- What are the Variables?
- Reliability?
- Validity?
- Statistical Significance?
- Generalizability?

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## Show Me The Proof!

- Lets Look at a Study...
  - [Do Cell Phones Really Hurt Academic Grades?](#)

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## Defining Population & Sample

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### Independent/Dependent Variable Keeping them Straight!

The Dependent Variable DEPENDS UPON  
Whether You Receive the Independent Variable  
or Not

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### Null Hypothesis

- Protocol
- Negative Way/What you know when you start!

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### MetaAnalysis

- Combines the results of several studies

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## Condition Groups

- Rather than Experimental Groups they are using Various Condition Groups.

Condition 0: Control  
Condition 1: 5mg of Drug  
Condition 2: 10 mg of Drug  
Condition 3: 15 mg of Drug  
Etc!

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## How is Research Conducted?

Validity Means...

The I. V. did cause the D.V.

In other words...

Your Hypothesis is True!

Reliability Means...

Like a Reliable Friend!

You obtain Consistent Results

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## Types of Validity

- Internal: Free of Confounding Variables.
- External: How well can the results be generalized.

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## How is Research Conducted?

### Experimentation

Statistical Significance Means...

Percent Chance of Obtaining the Same Result by Luck, Chance or Coincidence if we repeated 100 times!

.05

5% due to Luck or Chance or Coincidence

95% due the I.V.

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## Statistically Significant Vs. Clinically Significant?

SS = Outcome expected in the Experiment & finding is "believable" (verifiable, valid)

CS = Helpful & importance.

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## Blind Studies

- Single: Subject do not know which group
- Double: Neither the experimenter nor the participants know what group they are in
- Triple: Behavior Assessment conducted by someone other than principal investigator.
  
- True Effects...no bias!

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