Generating Research Ideas

Where Do the Ideas Come From?

- Observations of the world around us
- Serendipity
- Theories

Characteristics of Theories

- **Specification**
  - **How clearly they define their constructs and describe the proposed relationship between them**
  - **Poorly specified – ambiguity about constructs; hinders research process**
- **Scope**
  - **How much behavior they try to explain**

Concepts Related to Theory

- Theory versus hypothesis
  - Theories represent more complex systems
  - Hypotheses are derived from theories and test particular aspects of a theory
- Theory versus law
  - Laws are typically empirically-verified quantitative relationships
  - Theory is needed to explain why the relationship exists
  - Example – law of gravity
- Theory versus model

Roles of Theory in Science

- Understanding
- Prediction
- Organize and interpreting research results
- Generating research

Characteristics of a Good Theory

- Ability to account for data

- Explanatory relevance
  - **Theoretical explanation must offer good grounds for believing that the phenomenon would occur under specified conditions**

Characteristics of a Good Theory

- Testability
  - Must be capable of being put to empirical test

- Falsifiability
  - Capable of being proven wrong/disproof

Confirmation vs. disconfirmation:

- Nothing is ever <u>proven</u> but in some cases things can be <u>disproven</u>

- We may find support for our hypotheses but we do not "prove" them.

Characteristics of a Good Theory

- Parsimony
  - **Theory should explain phenomena possible assumptions**

Where Do the Ideas Come From?

- Observations of the world around us
- Serendipity
- Theories
- Practical problems

  For example:
  - Why do some employees have very high absenteeism rates.
  - Why do more car accidents happen on specific stretches of the road?

- Past research

Direct/Exact Replication

- Precise reproduction of the procedures of a study
- Nothing is changed from the original study
- Information gained from a direct replication reflects generality across other individuals

Other Types of Replications

- Partial replication
  - use a different variation of the variables
  - some change in procedures

- Replication and extension