Chapter 5

Conceptualization, Operationalization and Measurement

Conceptualization

- Definition: The mental process whereby fuzzy and imprecise notions (concepts) are made more specific and precise

- Indicators – an observation that reflects the variable

- Dimensions – a specifiable aspect of a concept

- Help us to actually define and make "real" these unreal concepts

Importance of Clarifying/Defining

- Examples
  - Unemployment: What is meant by this?
  - Politically Conservative: What is meant by this?

Operationalization Choices: Range of Variation

- When operationalizing or measuring your variable – how will you set up your ranges?

- Examples:
  - Question of Income
  - Question of Attitudes Toward Nuclear Power
  - Question of Political Orientation

Defining Variables and Attributes

- Exhaustive – your attributes must exhaust all of the possible answers

- Mutually exclusive – your attributes should not overlap

Levels of Measurement: Nominal Measure

- Definition: a level of measurement describing a variable whose attributes have only the characteristics of exhaustiveness and mutual exclusiveness

- Examples: Gender, Race, Region of Birth

Ordinal Measure

- Definition: a level of measurement describing a variable with attributes we can rank order

- Examples: GSS Variable Happy
  - Question: How happy are you?
  - Responses: Very Happy, Pretty Happy, Not Too Happy

Ratio Measure

- Definition: a level of measurement describing a variable with attributes that have all the qualities of nominal, ordinal and interval measure and in addition are based on a "true zero" point

- Examples: age, length of residence in a given place; number of times attended religious service

Implications of Levels of Measurement

- The type of variable determines the type of conclusions you can draw

- Example: Mean of Religious Affiliation?

- A higher level of measurement allows you to make the variable into a lower level of measurement

- Level of measurement you seek determined by analytical uses you plan

Two Criteria of Measurement Quality: 1. Reliability

- Definition: That quality of measurement method that suggests that the same data would have been collected in repeated observations of the same phenomenon

- Creating Reliable Measures:
  - asking things relevant & known to respondents
  - using measures from previous research
  - being clear about what you're asking

2. Validity

- Definition: A term describing a measure that accurately reflects the concept it is intended to measure

- Valid measure gets the whole concept

- Face validity – does it, on the face of it, seem to get at the concept