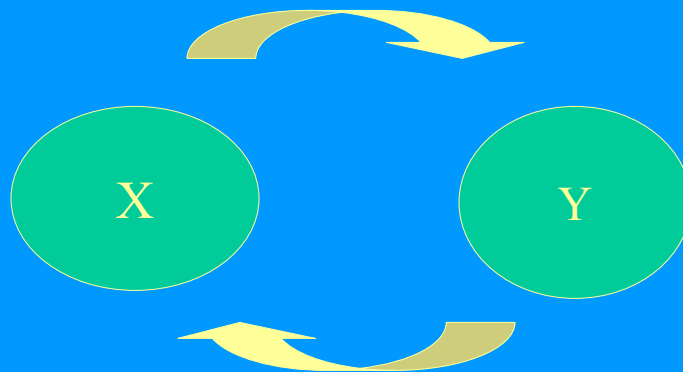


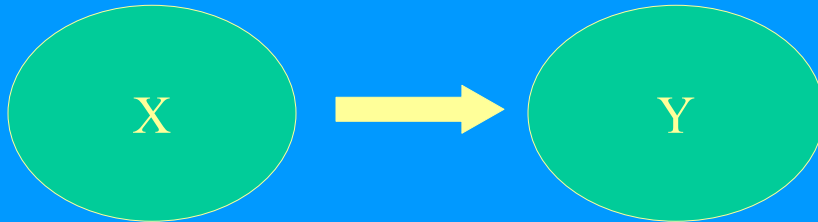
Basic Concepts

- Purpose of Science:
exploration, description, explanation
- Attributes:
descriptive characteristics
- Variables:
logical groupings of attributes

Association



Causality



Independence model (hypothetical)

Percentage Supporting Abortion, by Education Level		
	Low	High
Support	50	50
Oppose	50	50
Total	100	100
N	()	()

Positive association (hypothetical)

	Low	High
Support	40	80
Oppose	60	20
Total	100	100
N	()	()

Negative association (hypothetical)

	Low	High
Support	80	40
Oppose	20	60
Total	100	100
N	()	()

Units of Analysis

Babbie, p. 97:

“Categorizing possible units of analysis may make the concept seem more complicated than it needs to be. What you call a given unit of analysis—a group, a formal organization, or a social artifact—is irrelevant. **The key is to be clear about what your unit of analysis is.**” (my emphasis)

Units of Analysis (n=4)

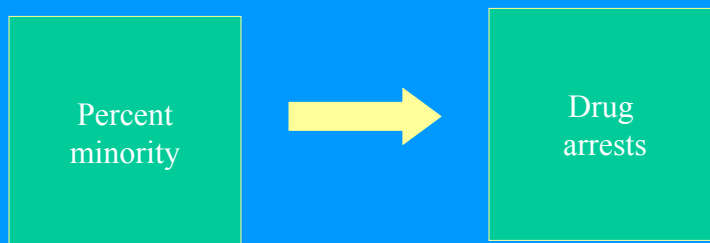
- Individual: attributes of people
- Social groups: populations of people
- Formal organizations: organizations with formal structure, rules, charter
- Social artifacts: social objects

What's the Unit of Analysis? (what or whom is studied?)

- 1) Sex and political attitudes
- 2) Car brand and crash statistics
- 3) Proportion transient and reported burglaries
- 4) Size of firm and percent of employees who are minority
- 5) Percent democrats in a congressional district and number of social programs
- 6) Support of oil companies for environmental causes and amount of oil spilled per year

Ecological Fallacy (confounding units of analysis)

Unit of Analysis = social group (city)



Moral: Don't move down to lower unit of analysis and make causal argument.

Timing of data collection and causality

- Cross-sectional: snapshot, can't infer causality
- Longitudinal studies: helps with causality
 - Trend studies
 - Cohort studies
 - Panel studies

Conceptualization (Basic definitions)

- Concept: mental images
- Conceptualization: specifying precisely what we mean by our concepts
- Interchangeability of indicators: evaluating multiple indicators of concepts

Alternative description

Assigning definitions:

- ✓ Real definition: concepts are not real
- ✓ Nominal definition: definition assigned
- ✓ Operational definition: specific definition
- ✓ Reification: danger of thinking our concepts are real

Miller and Stark's religiousness

- *Concept:* religiousness
- *Nominal definitions:* church attendance, belief in life after death, denominational loyalty, frequency of prayer
- *Operational definitions:*
[GSS Codebook](#)

Sample: General Social Survey

Miller and Stark's findings

Gender and Religiousness Over a Generation (U.S.)		
Religiousness	Year (t1)	Year (t2)
Church attendance	.19** (1972)	.18** (1998)
Belief in life after death	.12* (1973)	.12** (1998)
Denominational loyalty ¹	.19** (1974)	.17** (1998)
Frequency of prayer	.37** (1983)	.33** (1998)

Source: General Social Surveys. Correlations (gamma) with gender.
¹Survey question: "Would you consider yourself a strong [Lutheran, Catholic, etc.] or not very strong?" *p<.05; **p<.001
Miller and Stark, AJS, May, 2002

REMEMBER!

Effect = noun

Affect = verb

Operationalization: developing indicators

Operationalization:

- process of developing operational indicators (actual measurement)

Responses to questions:

- must be exhaustive (exhaust every possible response)
- must be mutually exclusive (responses must not overlap)

Range of variation:

- yes/no or degree of response

Levels of measurement (n=4)

- ✓ Nominal: categorical responses
- ✓ Ordinal: rank-ordered responses
- ✓ Interval: standard interval between responses
- ✓ Ratio: interval responses with true zero point

Evaluating religiousness

- GSS Codebook:
 - Church attendance
 - Belief in life after death
 - Denominational loyalty
 - Frequency of prayer

Guidelines for developing questions

- Exhaustive & mutually exclusive
- Open- vs. closed-ended
- Brief and clear
- No double-barrelled
- Relevance
- No negative items
- No biased items
- No socially desirable questions

Reliability and validity (evaluating the adequacy of indicators)

Reliability:

- ✓ how consistent is the indicator?

Validity:

- ✓ does indicator measure concept?

Modes of data collection

- Classical experiment
- Field research
- Content analysis
- Analysis of existing data
- Survey research
- In depth interviewing