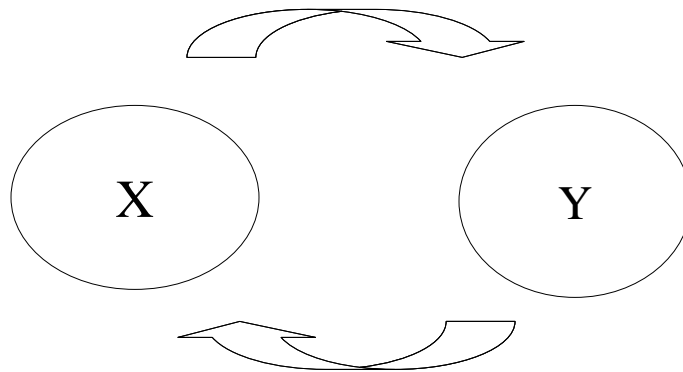


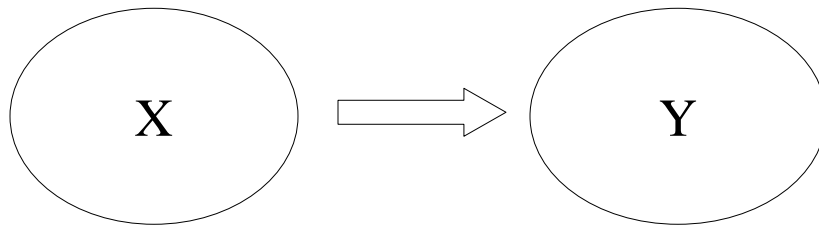
## Basic Concepts

- 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)

Percentage Supporting Abortion, by Education Level		
	Low	High
Support	40	80
Oppose	60	20
Total	100	100
N	( )	( )

## Negative association (hypothetical)

Percentage Supporting Abortion, by Education Level		
	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.

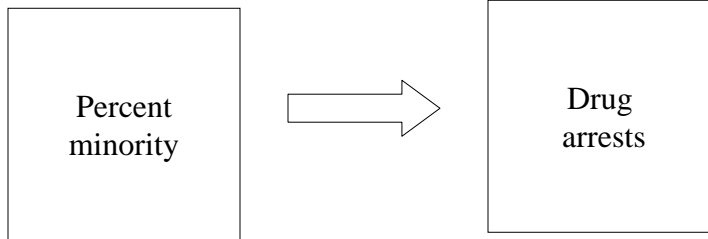
**The key is to be clear about what your unit of analysis is.”** (my emphasis)

## 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

## Ecological Fallacy (confounding units of analysis)

Unit of Analysis = social group (city)



## 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*:  
see GSS Codebook for questions (we'll come back to this)

**Sample**: General Social Survey

## Miller and Stark's findings

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

Source: General Social Surveys. Correlations (gamma) with gender.  
<sup>1</sup>Survey 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 (attend)
  - Belief in life after death (postlife)
  - Denominational loyalty (reliten)
  - Frequency of prayer (pray)

## 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