

## Measurement



- Measurement
  - Conceptual Definition of What You Want to Measure
    - e.g., What is 'Education?'
  - 'Operational' Definition of the Concept
    - e.g., Years of Formal Education
  - How Would You Define ...
    - Liberal or Conservative (Ideology)?
    - Race?
    - Religion?



- An Example of Measurement
  - NES (Telephone Version) Measure of Ideology
    - "When it comes to politics do you usually think of yourself as extremely liberal, liberal, slightly liberal, moderate or middle of the road, slightly conservative, extremely conservative, or haven't you thought much about this?"



- Another Example of Measurement
  - NES Measure of Race
    - "What racial or ethnic group or groups best describes you?" And ...
      - "Are you of Spanish or Hispanic origin or descent?"



- Yet Another Example
  - NES Measure of Religion
    - "Regardless of whether you now attend any religious services do you ever think of yourself as part of a particular church or denomination?" (IF YES:) "Do you consider yourself Protestant, Roman Catholic, Jewish or what?"

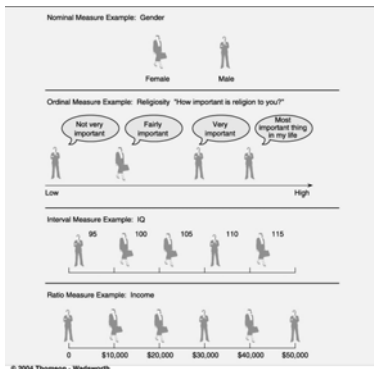


- Actual Measurement Involves Observation
  - Kaplan's (1964) Three Types of Variables
    - Direct Observations
    - Indirect Observations
    - Constructs

Levels of Measurement



1. Nominal
2. Ordinal
3. Interval
4. Ratio



- Single Item Measures vs. Scales
  - e.g., Political Efficacy
    - Single Item
    - How much influence do people like you have over what the government does? ... Very much influence, some influence, only a little influence, not much influence, or no influence at all?



- Scale Measure of Political Efficacy Agree or Disagree?

1. "Sometimes politics and government seem so complicated that a person like me can't really understand what's going on."
2. "People like me don't have any say about what the government does."
3. "Public officials don't care much what people like me think."



- Problems of Measurement



- An Example of a Measurement Debate
  - What Does This Scale Measure? ...



Irish, Italian, Jewish and many other minorities overcame prejudice and worked their way up. Black should do the same without any special favors.

... Agree or Disagree?



Generations of slavery and discrimination have created conditions that make it difficult for Blacks to work their way out of the lower class.

... Agree or Disagree?



It's really a matter of some people not trying hard enough; if blacks would only try harder they could be just as well off as whites.

... Agree or Disagree?



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Over the past few years, Blacks have gotten less than they deserve.



Most Blacks who receive money from welfare programs could get along without it if they tried.



Government officials usually pay less attention to a request or complaint from a black person than from a white person.

What Does This Scale Measure? ...

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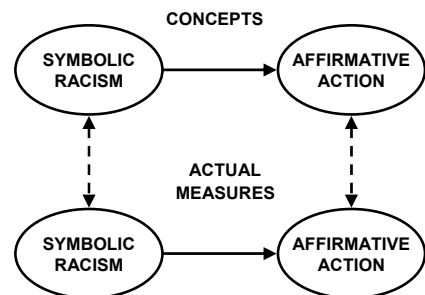
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"THE PROBLEM OF MEASUREMENT"



cf. Shively 2005



- Quality of Measures
  - Overview
    - Reliability
    - Validity



- Quality of Measures
  - Reliability
    - Two Types in Practice
      - Over-Time Reliability
        - Test-Retest Method
      - Internal Reliability
        - Scale Consistency Method



- Reliability, Cont.
  - Often a Function of Measurement Error
    - Random Error
      - e.g., Interviewer Punches Wrong Key
      - e.g., Respondent Inattention
    - Systematic Error
      - e.g., Social Desirability Bias
      - e.g., Acquiescence Response Bias



- Validity
  - Harder to Assess, More Subjective
    - e.g., Symbolic Racism Debate
      - Symbolic Racism or Conservatism?
    - How Well Does Operational Definition Reflect Conceptual Definition?



- Four Types of Validity
  - Face Validity
  - Criterion-Related Validity
  - Content Validity
  - Construct Validity