### Sociology 2013 Social Research Design

### **17. Experiments II**

Preview



- Review homework
- Solomon Four-Group Design
- External Invalidity

## Review Workbook assignment



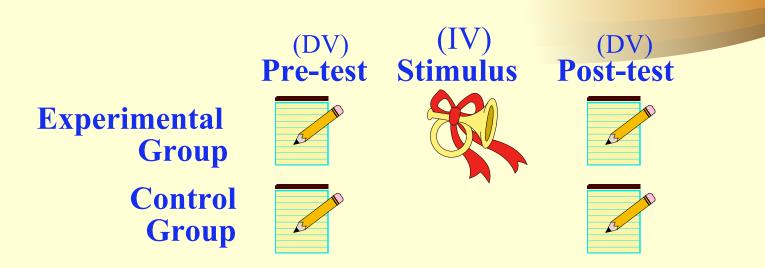
- Range: 15 200
- *Two* have 200\*\*\*
- 150-197:10
- 100 149: 16
- 15-99: 12
- 195 points remaining

# 8.2 Conducting an experiment

- Different forms of greeting
- Share about the experience of doing the experiment

Total = 21 slides

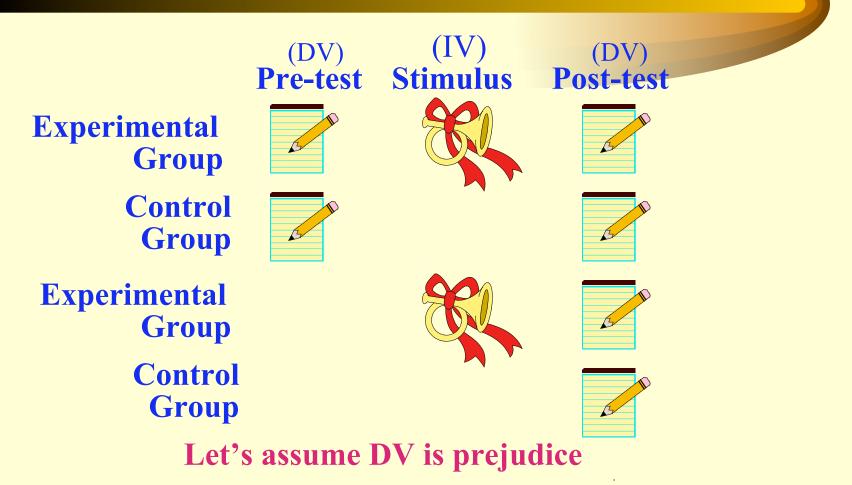
## The Classical Experiment



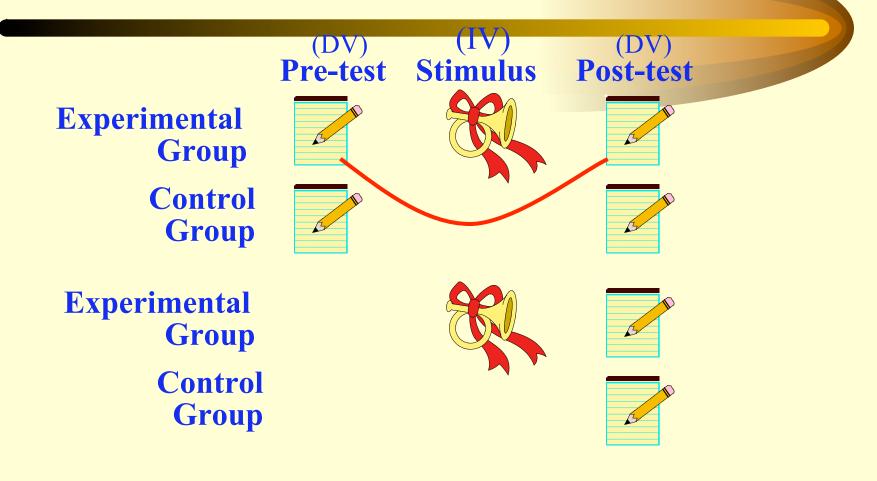
The problem with this is that the pre-test may cause the internal invalidity problem of testing.

How could we solve this problem?

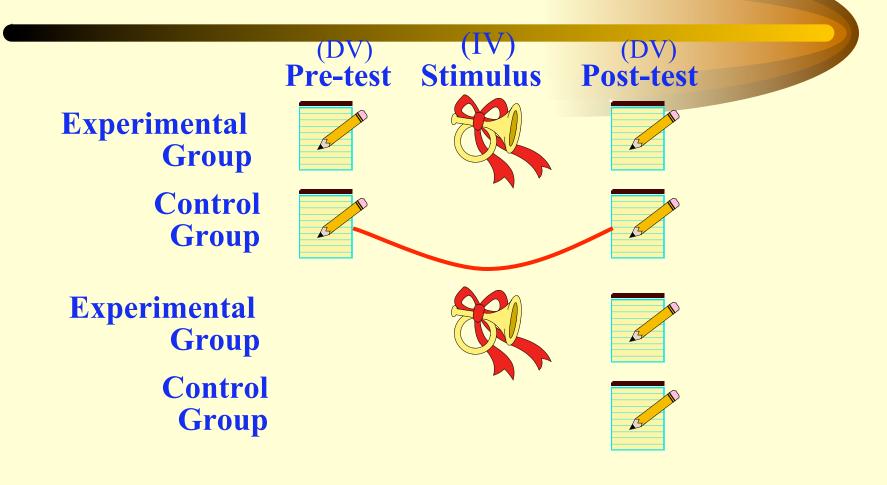
### Solomon Four-Group Design



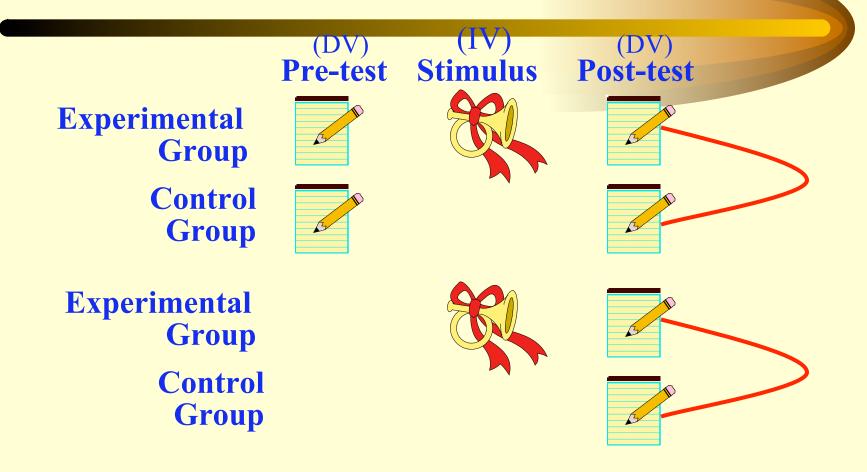
Total = 21 slides



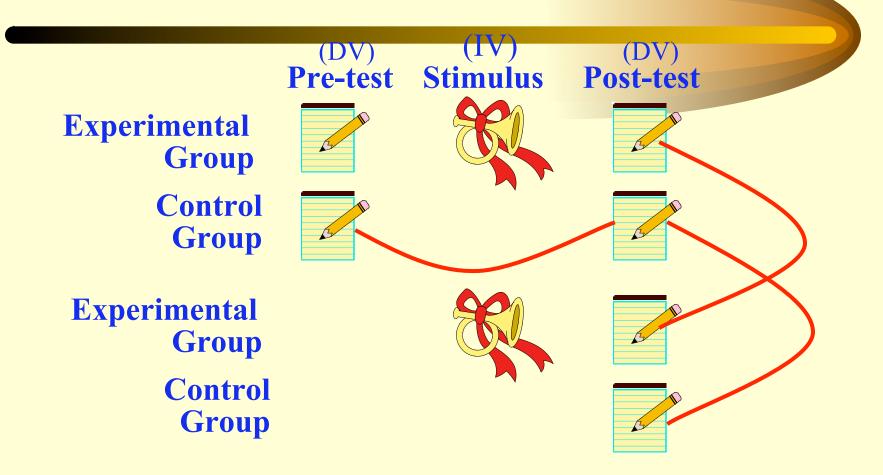
**Post-test should show less prejudice** Total = 21 slides



**Post-test should show same prejudice** Total = 21 slides



**Experimental groups should have less prejudice** Total = 21 slides



These would determine effects of testing

Total = 21 slides

## Problems of External Invalidity

- Generalizability of the observed effects
- Effects might not be produced in real world



### Interaction of Selection and Treatment



- Generalize beyond the kind of people studied?
- Maybe giving
  computers to high
  school students would
  work, but not adults

#### Interaction between Testing Situation and Treatment



Maybe the computers only produce the effect when subjects under scrutiny Putting computers in community associations might not help high

school students

### Interaction of History and Treatment

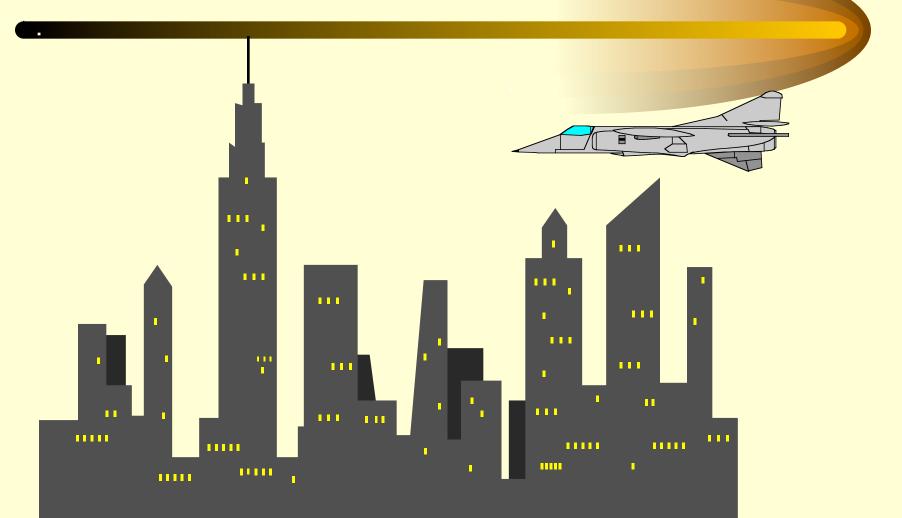


- Would historical events disrupt the cause/effect?
- Maybe computers will come to be seen as the tool of the devil

## Natural Experiments



## Natural Experiments: Bombing

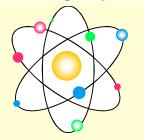


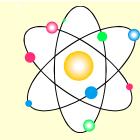
## Natural Experiments: Meltdown

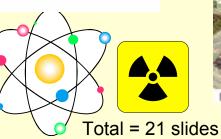
#### **Three-Mile Island (1979)**



Nuclear Regulatory Commission









Nuclear Regulatory Commission

## Natural Experiments: Roots

- Miniseries on African-American history (1976-79)
- Did it affect racial attitudes?
- How would you design a natural experiment?



## Preview Workbook Assignments

- 9.2 Doing a Survey
  - Be sure to **interview** people
  - Not self-administered





### Survey Research I Read Chapter 9