OBSERVATION IN PSYCHOLOGICAL RESEARCH

PSY300 LAB 2
6/15/05

1

INTRODUCTION

- We all observe people's behavior
- **Observers are fallible** even if careful (e.g., illusions)
- Scientists also rely on observation to learn about behavior
- Scientists use **methods to avoid errors** and describe behaviors as fully and accurately as possible

2

DESCRIPTIVE OBSERVATION METHODS

- In general, descriptive observation:
  - Enumerates which behaviors occur
  - Records quantity and frequency
- Four descriptive methods:
  - A. **Naturalistic observation**
  - B. **Case study**
  - C. **Survey**
  - D. **Meta-analysis**

3

A. NATURALISTIC OBSERVATION

- Set a boundary on range of behaviors to observe (e.g., use previous data)
- Create **clear and unambiguous** behavior categories
- **Interobserver reliability**: Degree to which independent observers agree in their observations. Usually measured with correlation (from +1 to -1)

4

A. NATURALISTIC OBSERVATION

- Examples:
  - Ethology: Study of behavior (usu. Biology)
    - 1) ID categories; 2) Record number of times
    - Ethogram: Catalog of all behavior patterns of organism, including their freq, duration, and context
  - Flashing eyebrows:
    - Many facial expressions similar across cultures
    - Ex: brief eyebrow flash when greeting each other
    - Not in Japan: considered suggestive or indecent

5

B. CASE STUDIES

- Intensive investigation of case (e.g., Genie)
- Main disadvantage: **Do NOT allow to infer cause-effect** relationships
- Findings are very limited in generalizability
- **Deviant-case analysis**: Compares two similar cases that differ in specific ways

6

C. SURVEY RESEARCH

- Results are **descriptive** in nature
- Importance of a **representative sample**
- To ensure representativeness of the sample:
  - Large **random sample** (expensive)
  - **Stratified sample**: Population is divided into smaller units, and these are sampled

7

D. META-ANALYSIS

- Science is a **cumulative process**
- The problem of **external validity**
- Meta-analyses reexamine a large group of observations (studies) on the same topic:
  - Summarizes across studies
  - Helps determine **external validity** and relative strength of a particular observation

8

ADVANTAGES OF DESCRIPTIVE RESEARCH

- **Early stages** of research process
- In cases when more controlled methods are not possible (e.g., for ethical reasons)
- **Flexible**, inexpensive
- Ecological function: Role of behaviors in adapting to the environment
- Observations are high in **ecological validity**

9

SOURCES OF ERROR IN DESCRIPTIVE RESEARCH

- Do NOT allow to determine causal relations among events
- Do NOT allow reproducibility
- **Researcher bias**: Difficulty to describe without interpreting
  - With animals: Anthropomorphizing

10

REACTIVITY IN DESCRIPTIVE RESEARCH

- **Reactivity**: Roles the participants may adopt in research settings
- Naturalistic observation:
  - **Unobtrusive vs. Participant** observations
  - **Unobtrusive** measures
- Case studies are retrospective in nature:
  - Ordinary and motivated **forgetting**

11

REACTIVITY (cont.)

- Surveys, interviews, and tests: **Response style**
  - Response **acquiescence** (yea-saying)
  - Response **deviation** (nay-saying)
  - **Social desirability**
- Edwards proposed a **forced-choice test**
- **Volunteer** problem and possible solutions

12

SUMMARY

- Descriptive methods include **naturalistic observation**, **case study**, **survey**, and **meta-analysis**
- Observation is important in **early stages** of research process, **flexible**, and **ecologically valid**
- Sources of error: **Causal relations canNOT be inferred**, **not reproducible**, **researcher bias**, and **reactivity**

13