

Observational Research Methods

Psychological research in the
world outside the laboratory
(and in the laboratory, too)

Two Dimensions of Observational Research

- Quality of Observation
 - Qualitative Research
 - Researcher focuses on qualities of experience
 - Quantitative Research
 - Researcher focuses on quantitative measures
- Directness of Observation
 - Direct Observation
 - Researcher observes the participants and situations
 - Indirect Observation
 - Researcher obtains reports or descriptions of participants and situations

Quality of Observation

- Qualitative Research
 - Often tries to capture the experiential aspect of situation; how does a situation seem to the participant?
 - Descriptive, narrative, interpretive
- Quantitative Research
 - Emphasizes measurable aspects of situation; what is the frequency, duration, intensity of participants' responses to situations

Qualitative Research Methods

- Ethnography
 - Detailed study of individuals in their context
 - <http://children.camden.rutgers.edu/profile/coe.htm>
- Narratives and oral histories
 - <http://www.lovethefestivalhall.org.uk/>
- Focus Groups
- Photographic essays
 - Visual sociology

Quantitative Research Methods

- Field Studies
 - Systematic Sampling
 - Pre-established, reliable codes
 - Quantitative Theorizing
- Protocol Studies
- Surveys

Measures in Quantitative Research

- Frequency
 - How often event takes place
- Duration
 - How long event takes place
- Latency
 - How long it takes for event to occur, following another event or signal
- Intensity
 - How salient or strong the event is

Directness of Observation

- Direct Observation
 - Observation of Traces
 - Observation without Intervention (Naturalistic Observation)
 - Observation with Intervention
- Indirect Observation
 - Interviews
 - Surveys

Direct Observation

- Behavior Traces
 - Residual effects of what people do
 - Paths created by taking shortcuts
- Observation without Intervention
 - Naturalistic Observation
- Observation with Intervention
 - Participant Observation
 - Structured Observation
 - Field Studies
 - Protocol Studies

Indirect Observation

- Surveys
- Checklists
- Interviews
 - Personal Interviews
 - Clinical Reports
 - Phone Interviews
 - Focus Groups

Direct Observation: Animal Behavior

- Primate Behavior
 - Jane Goodall on chimpanzees
http://www.janegoodall.org/chimps/chimps_behav_hab.html
 - Diane Fossey on gorillas
 - Sarah Hrdy on langurs
- Ethological Analysis
 - Tinbergen on bees
- Ethnographic Analysis
 - Harper on tramps

Direct Observation: Human Behavior

- On-line Observation
 - WebCams
 - <http://www.belmarbeachcam.com/>
 - <http://www.nolalive.com/bourbocam/classic>
 - Chat rooms
- Historical Observation
 - Vampires
 - <http://www.csicop.org/si/9603/staking.html>

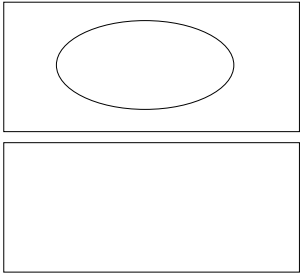
4 Aspects of Good Coding

- Utility
- Reliability
- Mutual Exclusiveness
- Exhaustiveness

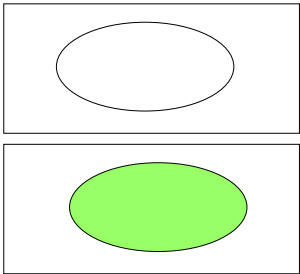
Features of Coding: Utility

- What makes a code useful?

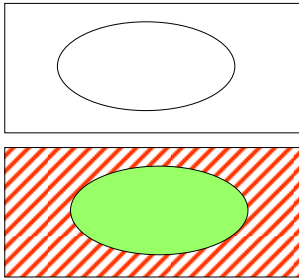
How would you describe the top figure?



How would you describe the top figure?



How would you describe the top figure?



Features of Coding: Utility

- Utility Depends on the Alternatives
 - Good coding allows one to distinguish between empirically meaningful differences

Coding Schemes

- Physical-Based Coding
 - facial expression of emotion
 - Facial Affect Coding System (Ekman & Friesen, 1978)
- Psychological/Social-Based Coding
 - facial expression of emotion
 - conventional emotional descriptors



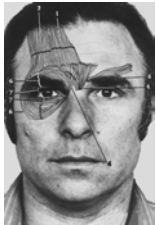
Facial Affect Coding System

<http://face-and-emotion.com/dataface/general/homepage.jsp>

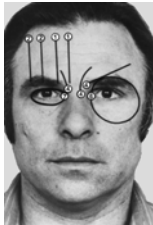
- Identify emotional expression in terms of "Action Units", which are muscles or muscle combinations that produce a particular effect.
- Action Unit 4 - Brow Lowerer
- Action Unit 1 - Inner Brow Raiser



Facial Affect System



Muscular Anatomy



Muscular Action



Features of Coding: Utility

- Utility depends upon the theoretical purpose
- Utility depends on the functional relationships that are found using the codes

Features of Coding: Mutually Exclusive Categories

- Every item or event is classified in one and only one category
 - Example: Playground Activities
 - Walking
 - Running
 - Sitting
 - Talking
 - Shouting

Features of Coding: Exhaustiveness

- Every event is assigned to a category
 - Example: Playground Activities
 - Walking
 - Running
 - Sitting
 - Talking
 - Shouting
- “Miscellaneous” can be a category

Features of Coding: Reliability

- Inter-observer Agreement
 - Index of concordance
 - $\# \text{ agree} / (\# \text{ agree} + \# \text{ disagree})$
 - Cohen’s kappa
 - $(O - C) / (1 - C)$
 - O is index of concordance
 - Correlation coefficients
 - Pearson correlation coefficient

Sampling Rules about Time and Place

- Where is the sample taken?
 - Which possible general locations
 - How much of target location
- When is the sample taken?
 - When does sampling begin and end?
 - How long is the sampling period?
 - When is it repeated?

Sampling Rules about Target

(after Martin & Bateson, 1986)

- *Ad libitum*
- Focal sampling
 - Focus on very few individuals, perhaps even just 1
- Scan sampling
 - Scan entire group to record specific, limited behaviors
- Behavior (event) sampling
 - Focus on a particular behavior, typically a rare event

Recording Rules

(after Martin & Bateson, 1986)

- Continuous Recording
 - Continuous monitoring of behavior
- Event-based Recording
 - Record events when they occur
- Time-based Recording
 - Intermittent monitoring of behavior
 - Interval sampling
 - One/zero sampling

References on Observational Research Methods

- Qualitative Methods
 - Bobbi Kerlin's Qualitative Research Methods site
<http://kerlins.net/bobbi/research/qualresearch>
- Quantitative Methods
 - The Oregon Social Learning Center
<http://www.oslc.org/obsframe.html>

Recording

- Narrative Records
- Checklist
- Electronic Recording

Issues in Observational Research

- Reactivity to Observer
- Failure to Appreciate Non-observed Factors
- Observer Bias
- Sequential Categories
