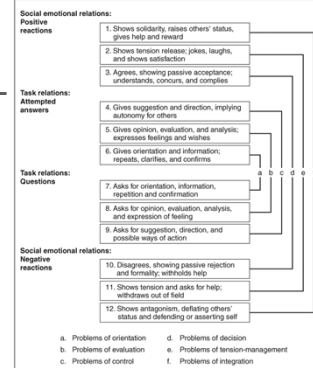


How to Quantify Qualitative Data

■ Judgment Study

- Using raters to quantify observational data
- E.g., Bales study of small group interactions
 - A group of participants discuss on a topic for a period of time
 - Trained observers observe group behavior through one-way screen (or watch video-tape recordings)
 - Trained observers record categories of «socioemotional» and «task-related» events

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What Can Be Learned from Quantifying Observations?

■ Judgment Study

- Using raters to quantify observational data
- Advantage:
 - We can use basic statistics
 - How many «events» there were per hour?
 - How many of them were «problem solving events»
 - We can measure judge-to-judge reliability
 - Degree of which different judges were rate the same event similarly

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What Can Be Learned from Quantifying Observations?

- Researchers must have clear and precise operational definitions for all behaviors that will be observed and recorded.
- Raters should practice using the coding system by comparing and discussing their practice ratings.

What Can Be Learned from Quantifying Observations?

- **Checklists** – researcher records whether particular behaviors or attributes were observed
 - Must formulate clear operational definitions
- **Measures of Latency**
 - **Reaction time** – the time that elapses between the presentation of a stimulus and the participant's response

What Can Be Learned from Quantifying Observations?

- **Measures of Latency (cont.)**
 - **Task completion time** – the length of time it takes participants to solve a problem or complete a task
 - **Interbehavior latency** – the time that elapses between two behaviors

How to Quantify Qualitative Data

- Content Analysis is an example of judgement study
 - Sorting and categorizing content of materials (books, videos, news papers etc.)
 - The goal is to classify words, phrases, or other units of text into a limited number of meaningful categories or to rate those units of text on specified dimensions.

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How to Quantify Qualitative Data

- Decide what units of text will be analyzed
- Define how the units of text will be coded
 - Classify into categories or rate?
- Raters code the textual material for all participants

Guidelines for Content Analysis

- Guidelines
 - Good judge-to-judge reliability (inter-rater reliability)
 - Categories should be relevant to hypotheses
 - Choose a good sampling procedure

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How Are Raters or Coders Chosen for Judgment Study?

- Use intuition
- Consult research literature
- Pilot testing

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How to Quantify Qualitative Data

- Archival Material
 - Secondary observation (information is twice removed from source)
 - Researchers analyze data pulled from existing records, such as census data, court records, personal letters, old newspapers, etc.

How to Quantify Qualitative Data

- Archival data is useful for studying:
 - Social and psychological phenomena of the past
 - Social and behavioral changes over time
 - Topics that involve articles, advertisements, or speeches
 - Anything that must be studied after it has occurred
- Judges categorize content of materials according to criteria
- Automated data analysis

Reactive and Nonreactive Observation

- Reactive Observation
 - Observations affect behavior observed
 - E.g. Simply asking students about their plan to engage in a certain behavior increases the likelihood of engaging in that behavior

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Reactive and Nonreactive Observation

- Nonreactive Observation
 - Observations don't affect behavior observed
 - Concealed (secret) measurement
 - E.g. Hidden recording device
 - Partial concealment (secrecy)
 - The act of recording is evident by who is recorded not
 - What might be the ethical problems in such research!

Reactive and Nonreactive Observation

- Nonreactive Observation
 - Unobstrusive observation
 - Participants are unaware of observation
 - Rational vs. emotional appeals
 - 1935 Election (Hartmann)
 - Rational and emotional leaflet
 - Examined actual voting behavior
 - Found greatest effect for emotional appeal
 - Lost-letter technique

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Identifying Rival Hypotheses

- Rival (alternative) Hypotheses
 - Alternative explanations for the reported results
 - Possible ways to improve the studies
 - This is how science progresses

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Identifying Rival Hypotheses

- Individual's personal values affect their perception
 - Participant's value orientation was determined with a questionnaire as
 - Predominantly aesthetic, theoretical, economic, social, political, religious
 - Words related with these orientations were presented rapidly
 - Participants recognized words related with their predominant value faster
 - They perceive these words more quickly

Identifying Rival Hypotheses

- Rival Hypothesis:
 - Individuals read more literature relevant to their values
 - They are more familiar words relevant to their values
 - They recognized words because they are familiar not because they perceive them faster
 - Next step would be to conduct an experiment in which familiarity of words were equated



Translation and Back Translation

- Questionnaires are developed in one language
 - Beck's Depression Inventory was developed in English
- Translation: Translating questions from source language to target language
- Backtranslation: Translating question from target language and source language
- Control if meaning is changed, or if anything lost in translation