

# A Brief Introduction to Qualitative Research



<http://jeps.efpsa.org/blog/2012/05/20/is-qualitative-research-still-considered-the-poor-relation/>

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# A Quick *What* & *Why* of Qualitative Methods



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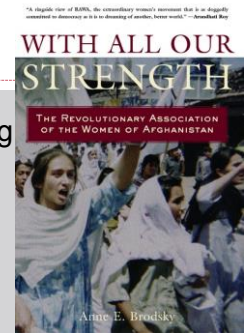
## The *What* of Qualitative Research

- Focus on non-numerical data
  - Description, experience, meaning, process, purpose, memory
    - Central to human behavior
- Emic rather than Etic
  - Prioritize multiple participant rather than expert perspectives
- Explore rather than control “biases”
  - Control and Randomization strips context
    - Real life has context, which matters – culture, community, peers, etc.
- Iterative process
- Address disjunction of Grand Theory and Local Context
  - Inapplicability of generalized data to individual case

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## Qualitative Examples

- Sense of Community in a job training center
- Afghan Resilience
  - Narrative, feminist exploration of Afghan women's experience of community-level risk and resilience
- Spero Manson
  - Ethnographic Inquiry of American Indian populations and Mental Health



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### The *Why* of Qualitative Research

- Identify variables and hypotheses for further study
  - Discovery phase of science

### Five Aims of Scientific Inquiry

Identification  
Description  
Explanation Generation

*Discovery*

Traditional  
Qualitative  
Focus

Explanation Testing  
Prescription/Control

Traditional  
Quantitative  
Focus

## The *Why* of Qualitative Research



- Identify variables and hypotheses for further study
  - Discovery phase of science
  - Quantitative methods rely on apriori hypotheses based on
    - "Gut concepts, reasoning and literature" - ungrounded

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## The *Why* of Qualitative Research



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  - Measurement reifies concepts, closing out alternatives
    - Qualitative allows for new concepts, themes, experiences to be discovered – a break from "normal science"

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## The *Why* of Qualitative Research

- Kuhn's "Normal Science" critique
  - Normal science not aimed at producing novelty (identification and discovery)
    - Seeks to find what sets out to find – prove anticipated hypothesis by rejecting null hypothesis
    - Only publish/report what was sought – missing the richest info
      - Like searching for lost keys under the light pole



Kuhn, T.S. (1962). *The structure of scientific revolutions*. <http://www.flickr.com/photos/morville/4273477501/sizes/m/in/photostream/>

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## The *What* and *Why* of Qualitative Research

- Identify variables and hypotheses for further study
  - Discovery phase of science
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  - Measurement reifies concepts, closing out alternatives
    - Qualitative allows for new concepts, themes, experiences to be discovered – a break from "normal science"
- Multiple:
  - Typologies and Aims
  - Disciplinary and Theoretical foundations
  - Sources and Forms of data

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## Data Sources and Collection Techniques

- Interview – (all interviews are not qualitative)
  - Individual and Focus Group
  - Structured, Semi- and Unstructured
- Observation
  - Participant/Observation
  - Structured
    - Mapping, Checklist, Rating Systems
  - Unstructured
- Nonverbal
  - Photographs, Video, Audio
- Historical/Archival
  - Inobtrusive, inexpensive, non-reactive
  - Documents – personal, unofficial
    - Diaries, Menus, Letters
  - Records – formal, official
    - Newspapers, Government Records, Library Circulation Records
- Material Traces- Hodder
  - In box pile, Shoveled snow piles
  - Physical traces
    - Erosion - Worn tiles, Book wear, short cuts in grass
    - Accretion – Kitchen grime

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## The *Why* of Qualitative Research

- Qualitative methods help to avoid often unrecognized errors:

### *Better known errors:*

- **Type 1 Error** – false positive
- **Type 2 Error** – false negative

### *Less recognized errors:*

- **Type 3 Error** - May solve the **wrong problem**
- **Type 4 Error** - May solve a problem **not worth solving**

Crabtree, B.F. & Miller W.L., Eds. (1999). *Doing qualitative research*. 2<sup>nd</sup> Ed..

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So can't we just solve this with:

- Open ended probes



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So can't we just solve this with:

- Open ended probes
  - Which of the following are problems in the residence halls:
    - ✖ Noise
    - ✖ Lack of privacy
    - ✖ Having to share living space with strangers
    - ✖ Design and decor
    - ✖ Other: \_\_\_\_\_



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    - ✖ Lack of privacy
    - ✖ Having to share living space with strangers
    - ✖ Design and decor
    - ✖ Other: \_\_\_\_\_
    - \_\_\_\_\_
    - \_\_\_\_\_
    - \_\_\_\_\_



## Problems with Open Ended Probes

- Open response limited to fixed question
- Survey and coding design often limits response length
  - Calls for generalizing rather than concrete description
- Schedule driven rather than response driven
  - Respondents not free to tell story in own way
- Condition people to wait for next prompt – self limiting
- Price of standardization is fragmentation

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Can qualitative methods really add to tried and true psychological research and knowledge?



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## Long History of Qualitative Methods in Psychology

- Wundt/Structuralism
- Freud
- Clinical Interviewing
- Piaget/Participant Observation
- Ainsworth – Stranger Situation

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## Qualitative Sampling

- Purposive/Purposeful – not random
- Breadth vs. Depth – qualitative can focus on one or the other
  - Focus groups – breadth
  - Individual interviews – depth
- Samples are smaller than in quantitative

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### How to Evaluate Qualitative Research Quality

#### Qualitative

- Credibility
- Transferability
- Dependability
- Confirmability

#### Quantitative

- Internal Validity
- External Validity
- Reliability
- Objectivity

Schwandt, T. A. (1997) *Qualitative Inquiry*; Marshall, C & Rossman, G.B. (1995) *Doing Qualitative Research*; <http://www.georgeglazer.com/archives/decartes/objects/images/funhousegeorge.JPG>

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### Credibility (vs. Internal Validity)

- Provide proof of fit between participants' experience, description, understanding AND researcher's reconstruction, representation and interpretation of same.



Schwandt, T. A. (1997) *Qualitative Inquiry*; Marshall, C & Rossman, G.B. (1995) *Doing Qualitative Research*; <http://www.georgeglazer.com/archives/decartes/objects/images/funhousegeorge.JPG>

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## Transferability (vs. External Validity)

- Because context, meaning & purpose, and local theory challenge generalizability
- Burden of demonstrating applicability of one set of findings to another (transferability of findings) depends upon:
  - Thick description provided by researcher
  - Careful reading and proper judgment of *reader*

Schwandt, T. A. (1997) *Qualitative Inquiry*; Marshall, C & Rossman, G.B. (1995) *Doing Qualitative Research* Anne Brodsky APA PSI 7/18

## Confirmability (vs. Objectivity)

- Could the findings be confirmed by another?
  - Show that observations and findings are not figments of one's imagination



(Schwandt, T. A. (1997) *Qualitative Inquiry*; Marshall, C & Rossman, G.B. (1995) *Doing Qualitative Research*; [http://neuroskeptic.blogspot.com/2011\\_02\\_01\\_archive.html](http://neuroskeptic.blogspot.com/2011_02_01_archive.html)) Anne Brodsky APA PSI 7/18

## Dependability (vs. Reliability)

- Focused on the **process** of the inquiry
- Assuring that the research was:
  - Logical, Traceable, Well documented
- Exact replication is neither expected nor sought in dynamic social world

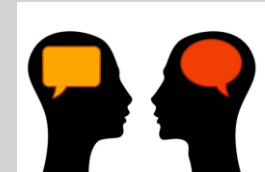


Schwandt, T. A. (1997) *Qualitative Inquiry*; Marshall, C & Rossman, G.B. (1995) *Doing Qualitative Research*.  
<http://www.graduateschool.uwm.edu/research/spectrum/snapshots/steven-foster/>

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## Interviewing

- Differences between research and clinical interview
  - No interpretation
  - No right to change or intervene in participant's thinking
  - Not acting to help participant
  - Specific but implicit agenda



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## Data Analysis - Iterative Process

- Transcribing/Transforming
- Coding
- Case Summaries
- Coding Summaries
  - Local Integration (Weiss) – Selective Coding (Strauss & Corbin)
  - Inclusive Integration (Weiss) – Axial Coding (Strauss & Corbin)
- Breakdown (Agar)
- Resolution (Agar)

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## A Brief Introduction to Qualitative Research

### QUESTIONS



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# Research Methods

## A Brief Survey of Methods and Ideas

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smcnary@towson.edu

Educational Technology and Literacy  
College of Education  
Towson University

Psychology Summer Institute, 2018

## A Little Epistemology

- Crud factor, auxiliary theories, *ceteris paribus* clauses
  - Meehl, P.E. (1990). Why summaries of research on psychological theories are often uninterpretable. *Psychological Reports*, 1990, 66, 195-244. doi: 10.2466/PRO.66.1.195-244
- Positivism, realism, and a survey of philosophy of science over two large frappucinos
  - Okasha, S. (2002). *Philosophy of Science: A Very Short Introduction*. Oxford.

## Epistemology/Methods match

- Identifies four worldviews, which imply particular methods choices

### Which are you?

- Post-positivist
  - Constructivist
  - Transformative
  - Pragmatic
- 
- Creswell J.W. (2014) Research Design: Quantitative, Qualitative, and Mixed-Method Approaches. 4th ed. SAGE.

## Person Centered vs. Variable Centered Block (1971)

- Variable centered: associations among variables, correlation methods, homogeneity of persons assumed
- Person centered: clusters of individuals sought, heterogeneity of persons assumed

### Good discussion

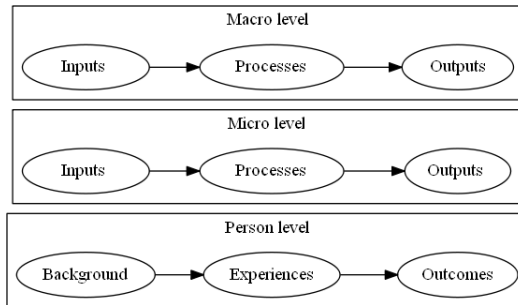
Laursen, B. & Hoff, E. (2006). Person-centered and variable-centered approaches to longitudinal data. *Merrill-Palmer Quarterly*, 52.3, 377-389. doi: 10.1353/mpq.2006.0029

# Sequence, Priority, and Strand-crossing

- Caps=priority, order=sequence
  - QUAL+QUAN (converging)
  - QUAL→quan (Qualitative first, quantitative lower priority)
  - QUAN(qual) (Quantitative first, qualitative embedded within)
- Crossing at level of
  - Design
  - Collection
  - Analysis
  - Interpretation
- Creswell, J.W. & Plano-Clark V.L. (2011) Designing and Conducting Mixed-Methods Research. 2nd ed. SAGE.

## Unit of Analysis

Which level are you working on?



- Rumsberger, R. W. (2003). *The advantages of longitudinal design*. In G.D. Haertel & B. Means (Eds.), *Evaluating Educational Technology* (205-229). New York: Teachers College Press.

# Sampling

- Population > Sampling frame > Sample
- SRS vs. Convenience

## Good Sampling reads

- Kish, L. (1965). Survey Sampling. Wiley.
- Kalton, G. (1983). Introduction to Survey Sampling. Sage.  
(little green book)

# Missing Data

- MCAR, MAR, NMAR
- Imputation, FIML

## Still pretty good missing data resources

- Schafer, J.L. and Graham, J.W. (2002). Missing data: our view of the state of the art. *Psychological Methods*, 7, 147-177. doi: 10.1037/1082-989X.7.2.147
- Enders CK. (2006). A primer on the use of modern missing-data methods in psychosomatic medicine research. *Psychosomatic Medicine*, 68(3), 427-436. doi: 10.1097/01.psy.0000221275.75056.d8.

# Measurement

## Latent Variables

- Tests as signs and samples, structural validity

### Links epistemology and testing

Loevinger, J. (1957). Objective tests as instruments of psychological theory. *Psychological Reports*, 3, 635-694. doi: 10.2466/PRO.3.7.635-694.

- Reliability, Validity, triangulation

### Nomological Net/Building your own

- Cronbach L. & Meehl P. (1955). Construct validity in psychological tests. *Psychological Bulletin*, 52, 281-302. doi: 10.1037/h0040957 <http://psychclassics.yorku.ca/Cronbach/construct.htm>
- DeVellis, R. (2012). *Scale Development*, 3rd. ed. Sage.

# Variable Centered Analytic Methods

- latent vs. observed
- cross sectional vs. longitudinal
- fixed vs. random effects
- ml vs.ols (goodness of fit vs. variance explained)

## Great Resources

### All good

- Cohen, J., Cohen, P., West, S.G. & Aiken, L.S. (2003). Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences. 3rd ed. LEA. (ols/ml)
- Gelman, A. and Hill, J. (2006). Data Analysis Using Regression and Multilevel/Hierarchical Models. Cambridge University Press. (ols/ml/simulation/bayes)
- Willett, J.B. & Singer, J.D. (2003). Applied Longitudinal Data Analysis: Modeling Change and Event Occurrence. New York: Oxford University Press. (longitudinal ols/ml/event history)

# Effect Sizes and Confidence Intervals

alternative to NHST

## Be "bilingual"

- Kline, R.B. (2005). Beyond Significance Testing. APA.
- Cumming, G., & Finch, S. (2005) Inference by eye: Confidence intervals, and how to read pictures of data. American Psychologist, 60, 170-180. doi: 10.1037/0003-066X.60.2.170

## Person Centered Analytic Methods

- cluster analysis
- mixture modeling (Muthén & Muthén:  
<http://www.statmodel.com/papers.shtml>)
- taxometric analysis: Waller, N.G. & Meehl, P.E. (1998).  
Multivariate taxometric procedures: Distinguishing types from  
continua. Sage.
- latent class/transition analysis: Collins, L.M. & Lanza, S.T.  
(2009). Latent Class and Latent Transition Analysis: With  
Applications in the Social, Behavioral, and Health Sciences,  
Wiley. (<http://methodology.psu.edu>)

## Person Centered Analytic Methods

continued

- correspondence analysis (SAGE books, online videos of CARME conference presentations:  
<http://carme2011.agrocampus-ouest.fr/gallery.html>)
- configural frequency analysis: von Eye, A. (2002). Configural Frequency Analysis: Methods, Models, and Applications. Psychology Press.
- scaling methods (a whole lot of little green SAGE books)

# General Statistical Software

**SAS** <http://www.sas.com>

**SPSS** <http://www.spss.com>

**STATA** <http://www.stata.com>

**R** <http://cran.us.r-project.org>

## Specialty Statistical Software

**GPower** <http://www.gpower.hhu.de/en.html>

**MLwiN** <http://www.bristol.ac.uk/cmm/software/mlwin/>

**HLM** <http://www.ssicentral.com/hlm/index.html>

**Mplus** <http://www.statmodel.com>

**EQS** <http://www.mvsoft.com/>

**AMOS** <http://www-03.ibm.com/software/products/en/spss-amos>

**lavaan** <http://lavaan.ugent.be/>

**Mx** <http://www.vcu.edu/mx/>

**OpenMx** <http://openmx.psyc.virginia.edu/>

## Methods

- meta analysis: Cooper, H.M., Hedges, L.V. & Valentine, J.C. Eds. (2009). The Handbook of Research Synthesis and Meta-analysis. 2nd ed. Russell Sage Foundation.
- social network analysis, influence/selection models: Wasserman, S. & Faust, K. (1994). Social Network Analysis: Methods and Applications. Cambridge University Press.
  - applications to psychometrics, personality, psychopathology, cross-sectional and time-series, see Eiko Fried's resources: <http://psych-networks.com/tutorials/>

## Methods

continued

- bayesian data analysis: Kruschke, J.K. (2011). Introduction to special section on bayesian data analysis. Perspectives on Psychological Science, 6(3) 272–273. doi: 10.1177/1745691611406926
- data mining: Hastie, T., Tibshirani, R., & Friedman, J. (2009). The Elements of Statistical Learning: Data Mining, Inference, & Prediction. 2nd ed. Springer. Tan, P.N., Steinbach M., & Kumar, V. (2006). Introduction to Data Mining. Addison-Wesley.
  - see Psychological Methods December 2016 for applications to Big Data, including web-scraping and text mining/analysis

## Tools

- preparing manuscripts: Kazdin, A.E. (1995). Preparing and evaluating research reports. *Psychological Assessment*, Vol 7(3), 228-237. doi: 10.1037/1040-3590.7.3.228.
- research reporting standards: APA Publications and Communications Board Working Group on Journal Article Reporting Standards. (2008). Reporting standards for research in psychology: Why do we need them? What might they be? *American Psychologist*, 63(9), 839–851. doi: 10.1037/0003-066X.63.9.839.

## Tools con't.

- writing well, technically: Gopen, G., & Swan, J. (1990). The science of scientific writing: If the reader is to grasp what the writer means, the writer must understand what the reader needs. American Scientist, 78(6), 550-558.  
<http://www.americanscientist.org/issues/page2/the-science-of-scientific-writing>

- Research centers
  - ICPSR <http://www.icpsr.umich.edu/icpsrweb/sumprog/>
  - MARCES <http://marces.org/>
  - UConn *M*<sup>3</sup> <http://www.modeling.uconn.edu/>
- Professional Society meeting pre-conference workshops
  - SREE <https://www.sree.org/>
  - APA <http://www.apa.org>
  - APS <https://www.psychologicalscience.org/>
  - AERA <http://www.aera.net>