

# Qualitative Coding: Strategies for Transparency and Reproducibility

Dr. Emily Meanwell

IU Workshop in Methods

April 27, 2018

# “Replication, Reproducibility, and Transparency”



## Workshop in Methods

2017-2018 Theme: Replication,  
Reproducibility, and Transparency



**WORKSHOP IN METHODS**

<http://go.iu.edu/wim>

## Transparency in Ethnography

**Dr. Victoria Reyes**

Assistant Professor of Sociology  
University of California, Riverside



**Friday, March 30, 2018, 2-3:30pm**

Social Science Research Commons Grand Hall, Woodburn Hall 200

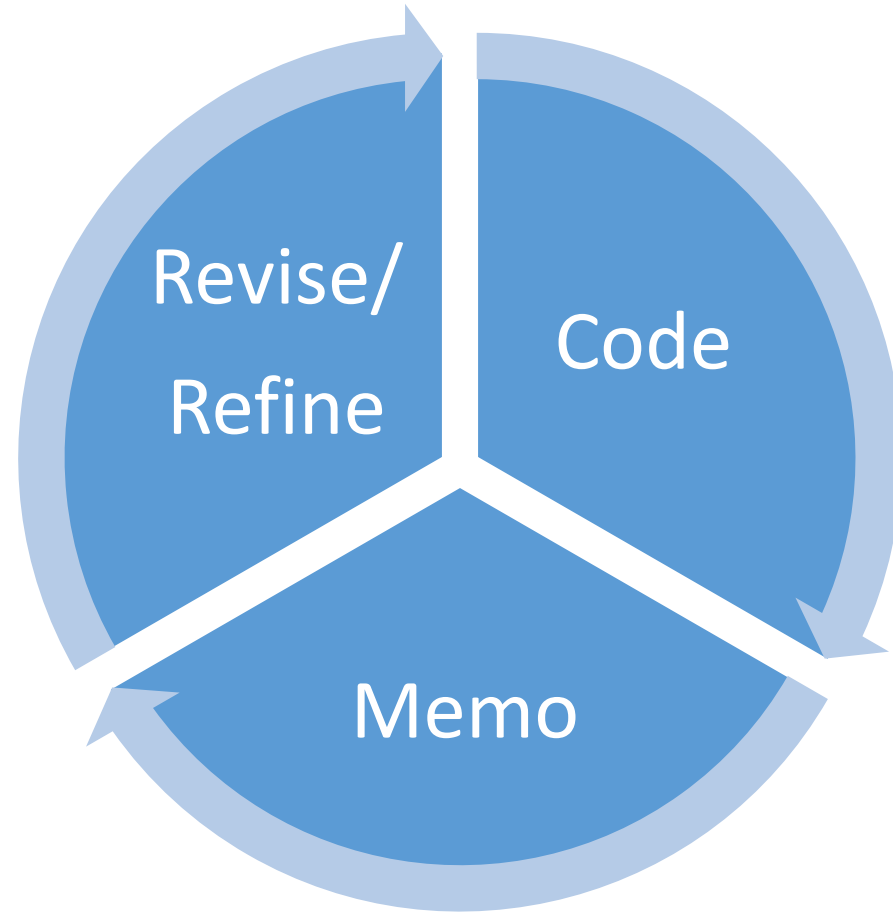
# Overview of Qualitative Coding

Part One

# What is coding?

- **Coding** assigns to a portion of data a word or short phrase that identifies some important aspect of that portion of data.
- Coding is one common aspect or *part* of qualitative analysis.
- Coding is often a cyclical and/or iterative process.

# Coding as a cyclical and iterative process



# Hands-on exercise 1

Categorize, classify, group, and/or order a set of 12 photographs, and come up with labels for your groups or classifications.

# Hands-on exercise 1

What categories, classifications, and/or ordering schemes did you come up with? What labels did you give the groups or classifications?

# General types of coding

- First-cycle, open, initial, substantive, and/or exploratory coding
- Second-cycle, selective, theoretical, and/or focused coding
  
- Inductive and deductive (and abductive!) approaches to coding
  
- Literal or in vivo codes and interpretive codes



# More types of coding: some examples

- **Attribute coding:** Basic descriptive information, such as the fieldwork site; participant characteristics or demographics; data type; date and time information; etc.
- **Structural coding (or index coding):** Coding based on questions (research questions, interview guide questions) and/or topics of inquiry
- **Descriptive coding:** Coding of the basic topics of chunks of data (often a noun)
- **Process coding:** Using gerunds (“-ing” words) to code action in the data

# Hands-on exercise 2

Think about a qualitative study investigating your research interests. What kinds of codes could you imagine using?

- Attribute codes
- Structural codes
- Descriptive codes
- In vivo codes
- Process codes

# Hands-on exercise 2

What ideas for possible codes did you come up with?

- Attribute codes
- Structural codes
- Descriptive codes
- In vivo codes
- Process codes

# Tools and Practical Strategies for Coding

- Paper (manual coding)
- Electronic using basic software (word processing and spreadsheets)
- Computer-Assisted Qualitative Data Analysis (CAQDAS)
  - Atlas.ti, NVivo, MaxQDA, etc.
  - Dedoose (web-based, subscription)
  - *Use trial versions or the Qual Lab to see which you like best*

# Examples

Examples of coding using paper, CAQDAS, and Excel

# Hands-on exercise 3

- Think about a qualitative study investigating your research interests. What kinds of data might you have? What are some different tools you could use for coding it?
  - Manual or paper coding
  - Electronic coding with readily-available software
  - CAQDAS

# Hands-on exercise 3

- What kinds of data did you come up with? What different tools could you use in your analysis? What are the benefits and drawbacks of these different tools or strategies?
  - Manual or paper coding
  - Electronic coding with readily-available software
  - CAQDAS

# Reproducibility and Transparency

Part Two



# Reproducibility and Transparency in Qualitative Coding

- Two key components:
  - Documentation
  - Sharing
  
- Documentation:
  - Codebooks
  - Research logs
  - Memos

# Developing a codebook

- Key components:
  - Code
  - Definition
  - Descriptions of how to decide when (and when not) to apply the code
  - Examples of data that represent the code

# Sample codebook template (Saldaña)

Short description:	The name of the code itself
Detailed description:	A 1-3 sentence description of the coded datum's qualities or properties
Inclusion criteria:	Conditions of the datum or phenomenon that merit the code
Exclusion criteria:	Exceptions or particular instances of the datum or phenomenon that do not merit the code
Typical exemplars:	A few examples of data that best represent the code
Atypical exemplars:	Extreme or special examples of data that still represent the code
"Close, but no":	Data examples that could mistakenly be assigned this particular code

Saldaña, Johnny. 2016. *The Coding Manual for Qualitative Research* (3<sup>rd</sup> edition). Thousand Oaks, CA: SAGE Publications. (page 28)

# Sample codebook template (MacQueen et al.)

Code:	
Brief definition:	
Full definition:	
When to use:	
When not to use:	
Examples:	

MacQueen, Kathleen M., Eleanor McClellan-Lemal, Kelly Bartholow, and Bobby Milstein. 2008. "Team-based Codebook Development: Structure, Process, and Agreement." Pp. 119-134 in Greg Guest and Kathleen M. MacQueen (eds.), *Handbook for Team-Based Qualitative Research*. New York: AltaMira Press.

# Codebook Examples

Examples of codebooks from recent studies

# Hands-on exercise 4

- Think about a qualitative study investigating your research interests, and about developing a codebook for one or more of the codes you developed in the previous exercise.
  - What components would your codebook template include? Are there things you would remove from or add to the examples given?
  - Can you come up with a rough draft of a codebook entry for one of your descriptive codes?

# Hands-on exercise 4

- Think about a qualitative study investigating your research interests, and about developing a codebook for one or more of the codes you developed in the previous exercise.
  - What components did you decide to include in your codebook template? What did you remove from or add to the examples given?
  - What was your experience of coming up with a rough draft of a codebook entry for one of your descriptive codes like? What was easy? What was more challenging?

# Documenting codebook development

- Tracking the evolution of your codes and codebooks is an important aspect of transparency and reproducibility.
  - Tracked changes
  - Changelogs
  - Meeting notes
  - Research logs
  - Memos



# Assessing intercoder agreement or reliability

- Would (or did) multiple people code the data the same way?
  - Informal intercoder agreement
  - Formal measures of intercoder reliability
    - Freelon, D. (2010). ReCal: Intercoder reliability calculation as a web service. *International Journal of Internet Science*, 5(1), 20-33. <http://dfreelon.org/utils/recalfront/>

# Strategies for transparency

- Sharing your coded data
- Sharing your codebook
- Sharing other documentation

# Hands-on exercise 5

- Think about a qualitative study investigating your research interests.
  - What aspects of your data or analysis could you share with others?
  - What aspects would you not want to share, and why?

# Thank you!

[emeanwel@Indiana.edu](mailto:emeanwel@Indiana.edu)

# Helpful References

MacQueen, Kathleen M., Eleanor McClellan-Lemal, Kelly Bartholow, and Bobby Milstein. 2008. "Team-based Codebook Development: Structure, Process, and Agreement." Pp. 119-134 in Greg Guest and Kathleen M. MacQueen (eds.), *Handbook for Team-Based Qualitative Research*. New York: AltaMira Press.

Saldaña, Johnny. 2016. *The Coding Manual for Qualitative Research* (3<sup>rd</sup> edition). Thousand Oaks, CA: SAGE Publications.