# Qualitative Comparative Analysis

Claude Rubinson University of Houston—Downtown Houston, TX

rubinsonc@uhd.edu http://gator.uhd.edu/~rubinsonc/ http://grundrisse.org/qca/

University of Arizona Arizona Methods Workshops January 8–10, 2015

# Overview

- Day 1: Introductions and overview
  - Review of QCA resources, publications, and software
  - QCA as an investigation of invariance
  - Three analytic components of QCA: dataset calibration, necessity analysis, and sufficiency analysis
  - Three types of QCA projects: identifying causal recipes, uncovering taxonomies, understanding context
  - Discussion of research projects
- Day 2: Nuts and bolts—QCA in depth
  - Dataset calibration
  - Necessity analysis
    - Consistency and coverage measures for necessity
    - Testing for necessary conditions
  - Sufficiency analysis
    - Consistency and coverage measures for sufficiency
    - Constructing and reducing truth tables
    - Interrogating the analysis and deriving solutions
- Day 3: Putting it all together
  - Conducting a step-wise QCA analysis
  - Writing up and presenting QCA research
  - Discussion of research projects

### Three Analytic Components of QCA



# **Dataset Calibration**

- Successful calibrations demand substantive and theoretical case knowledge
- Key question for each calibration: What is the target set?
- Usually best to keep calibrations simple and straightforward but can be complex and accommodate time, sequences, and nested designs (cf. "macrovariables").

# **Necessity Analysis**

- Don't skip the necessity analysis
- Traditionally, comparative researchers have focused on necessity, not sufficiency ("No bourgeois, no democracy.")
- But most QCA projects focus on sufficiency and ignore necessity. Why?

# Sufficiency Analysis

- Pay attention to contradictions; they often indicate an insufficiently-specified model
- Graphing your truth tables can clarify the theoretical relationships among your cases
- Be judicious with counterfactual claims
- Factor your results
- Return to your cases
- Address coverage in your discussion. What's still unexplained? Why?

# Recommended Analytic Strategy

#### Preliminaries, Diagnostics, and Calibration:

- Import data into *Kirq* to test for missing and illegal values, or forthcoming QCA add-on for Google Sheets
- Use conventional statistical software or *fs/QCA* to run crosstabs
- Calibrate data manually, or by using *fs/QCA* or Google Sheets add-on

#### Step-wise Procedures:

- Conduct necessity analysis
- Conduct sufficiency analysis on observations exhibiting the necessary condition
- Conduct sufficiency analysis on observations not exhibiting the necessary condition
- Build sufficiency analysis up from simple to complex, keeping in mind the nature of invariance—begin with just two causal conditions and investigate how the truth table changes as you introduce additional conditions

# **General Recommendations**

- Explain your calibration process: why/how did you choose your thresholds?
- If your dataset is small enough, reproduce it in your write-up
- Truth tables are usually small enough to be included; can omit remainders to save space
  - Use standard layout for truth table rows (see Rubinson's papers or *Kirq* for examples)
- Discuss the full range of solutions, from complex to parsimonious, and/or explain why you chose the solution that you did. Don't simply choose the intermediate solution without explaining why.
- Include 2x2 tables, scatterplots, and Venn/Euler diagrams as appropriate