Qualitative Comparative Analysis: A Cross-Disciplinary Methodology for Studying Similarities and Differences

Claude Rubinson
University of Houston—Downtown
Houston, TX

qca@grundrisse.org
http://grundrisse.org/qca/

UNAM
October 17–21, 2025

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Perdón. 🇲🇽💙

Overview

Day 1: The Logic of QCA

- Introductions and discussion of research projects

Day 2: Three Analytic Components of QCA

- Calibration, Necessity Analysis, Sufficiency Analysis

Day 3: Putting QCA into Practice

- Software for conducting QCA

Day 4: Advances in QCA

- Time in QCA, Generalized Analytic Induction

Day 5: Pulling it all Together

- Building robust models, Visualizing and presenting QCA
- Discussion of research projects

Resources

Community

- COMPASSS
- European QCA Conference
- QCA Conference of the Americas
- Other workshops and trainings throughout the year; see https://compasss.org/events

Foundational Texts

- Ragin (1987) *The Comparative Method*
- Ragin (2000) *Fuzzy-Set Social Science*
- Ragin (2008) *Redesigning Social Inquiry*
- Ragin (2023) *Analytic Induction for Social Research*

Resources

Recommended Texts on QCA and Set-Analytic Methods

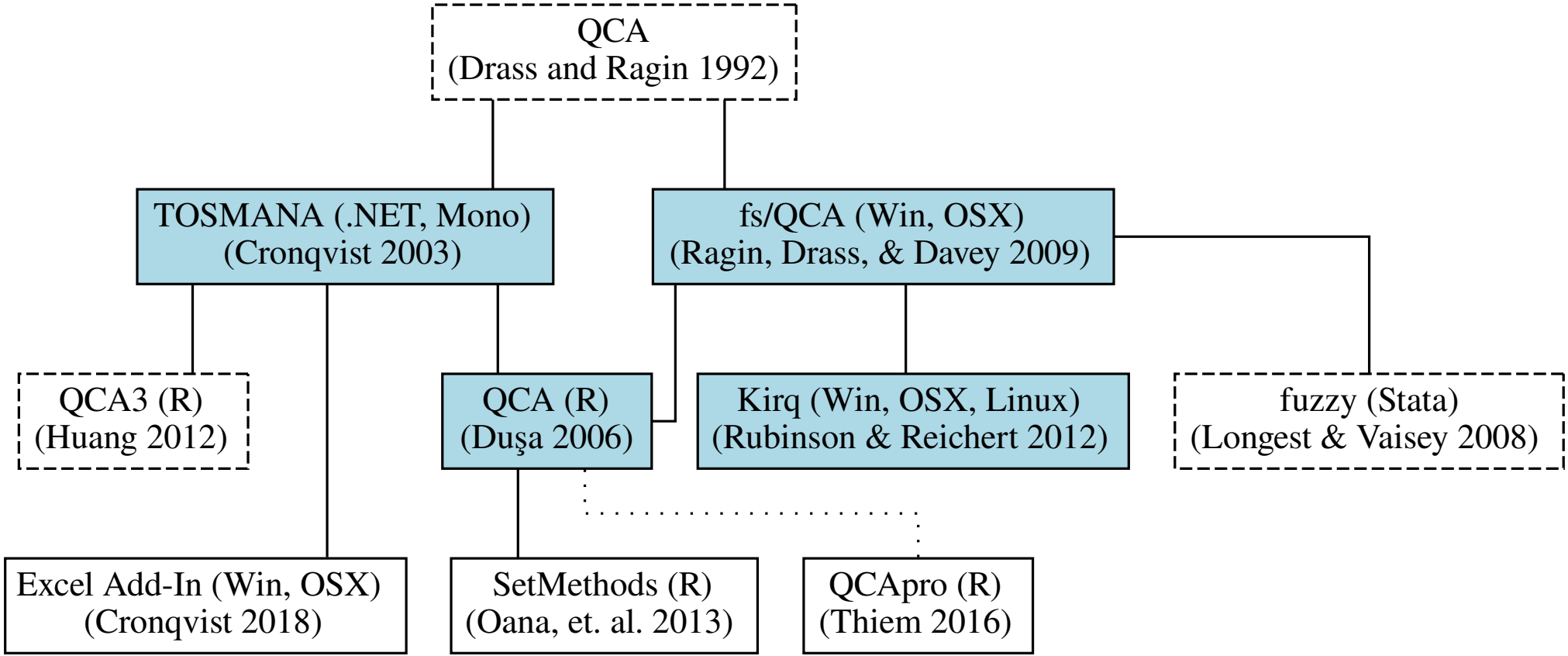
- Ragin and Fiss (2016) *Intersectional Inequality*
- Goertz (2020) *Social Science Concepts and Measurement*
- Kahwati and Kane (2020) *Qual. Comp. Analysis in Mixed Methods Research and Evaluation*
- Mahoney (2021) *The Logic of Social Science*
- Mello (2021) *Qualitative Comparative Analysis: Introduction to Research Design & Application*
- Oana, Schneider and Thomann (2021) *Qualitative Comparative Analysis Using R*
- Rutten (2024) *Qualitative Comparative Analysis: Learning from Cases*

Resources

Recommended Texts on Case-Oriented and Comparative Research

- Byrne and Ragin (2013) *Sage Handbook of Case-Based Methods*
- Goertz and Mahoney (2012) *A Tale of Two Cultures*
- Gerring (2007) *Case Study Research*
- George and Bennett (2005) *Case Studies and Theory Development in the Social Sciences*
- Brady and Collier (2004, 2010) *Rethinking Social Inquiry*
- Mahoney and Rueschemeyer (2003) *Comparative Historical Analysis in the Social Sciences*
- Gaddis (2002) *The Landscape of History*
- Franzosi (1995) *The Puzzle of Strikes*
- Ragin and Becker (1992) *What is a Case?*
- Skocpol (1979) Introduction to *States and Social Revolutions*

A menagerie of software packages



Varieties of QCA: csQCA, fsQCA, mvQCA

- *The Comparative Method* (1987) describes “crisp-set QCA”
- *Fuzzy-Set Social Science* (2000) describes “fuzzy-set analysis”
- *Redesigning Social Inquiry* (2008) unifies “crisp-set QCA” and “fuzzy-set QCA”
- csQCA is a special form of fsQCA
- fs/QCA, Kirq, and R package are all based on the RSI algorithms
- What about multi-valued QCA?

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What is the Comparative Method?

- Many names: comparative research, comparative analysis, small-N comparison, small-N analysis, case studies, cross-case studies
- Is a technique for identifying and analyzing invariant (consistent) relationships.
- Characterized by the search for necessary and sufficient conditions.
- Is comparative research necessarily small-N?
- Is comparative research necessarily case-oriented?

Invariant Relationships: Certain aspects of cases tend to co-occur

- “All happy families are alike; each unhappy family is unhappy in its own way” (Tolstoy, *Anna Karenina*)
- Tenured faculty tend to have many publications
- Religious fundamentalists tend to be politically conservative
- “business leaders and owners of capital ... are overwhelmingly Protestant” (Weber 1958:35)
- “No bourgeois, no democracy.” (Moore 1966:418)
- Smoking causes lung cancer
- HIV causes AIDS; SARS-CoV-2 causes COVID-19
- Is marijuana is a “gateway” drug?

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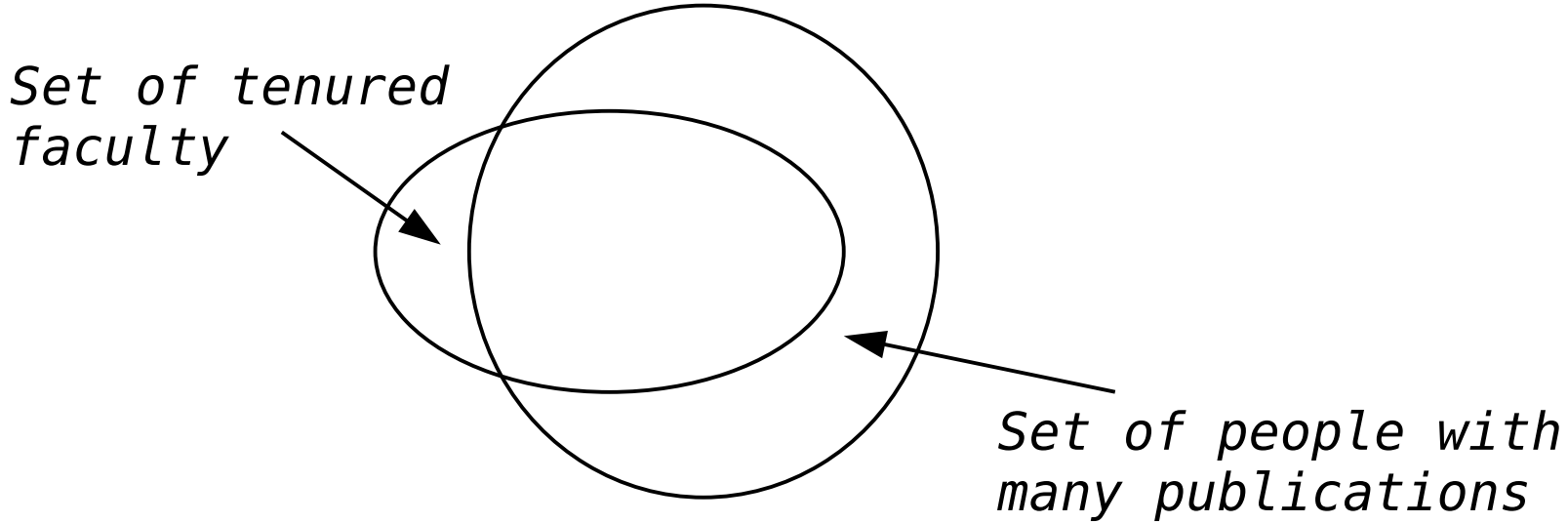

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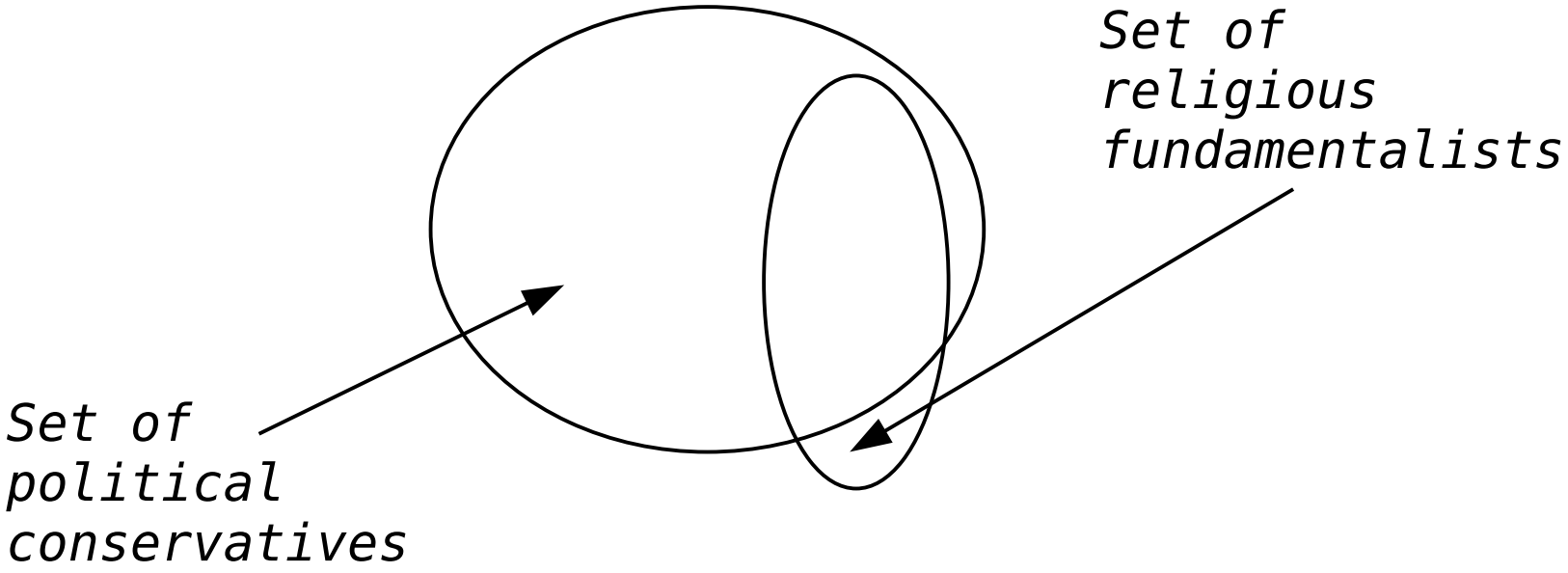

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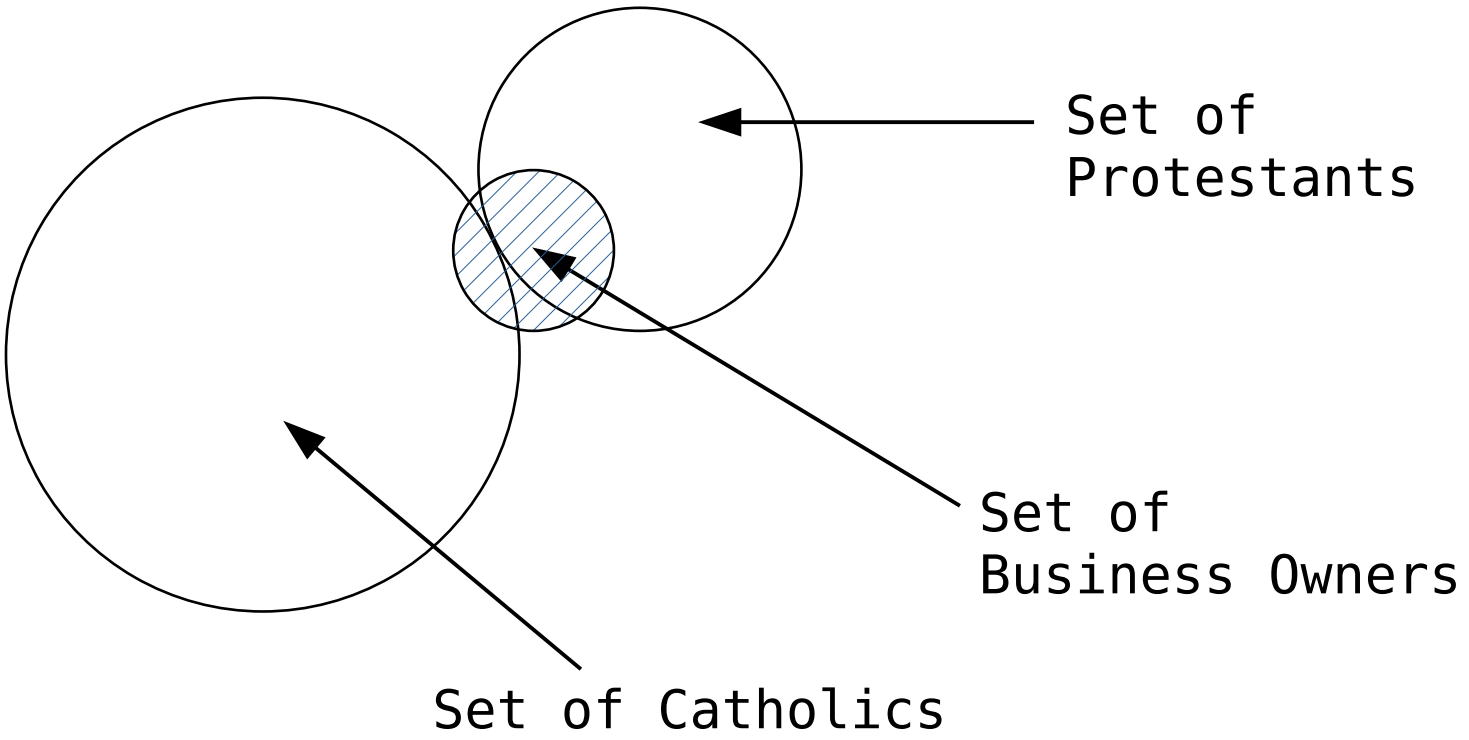

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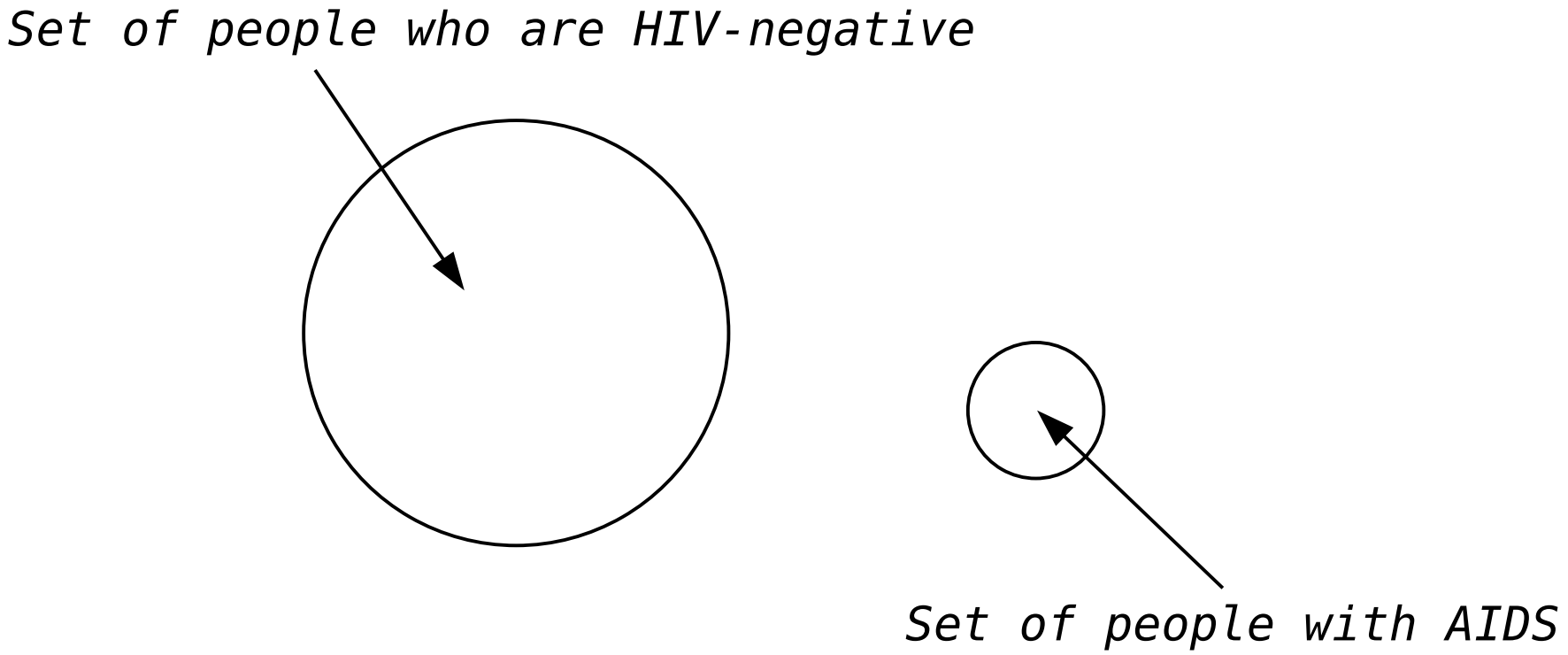

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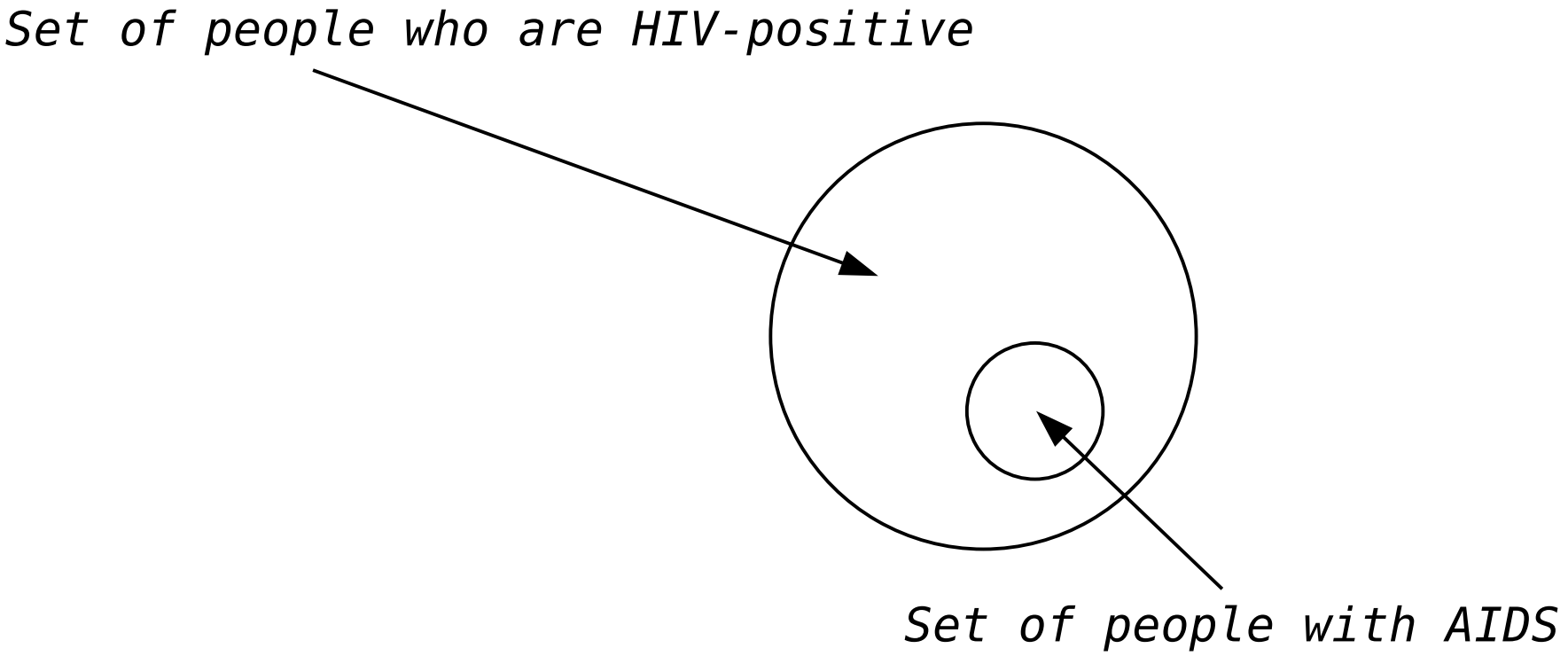

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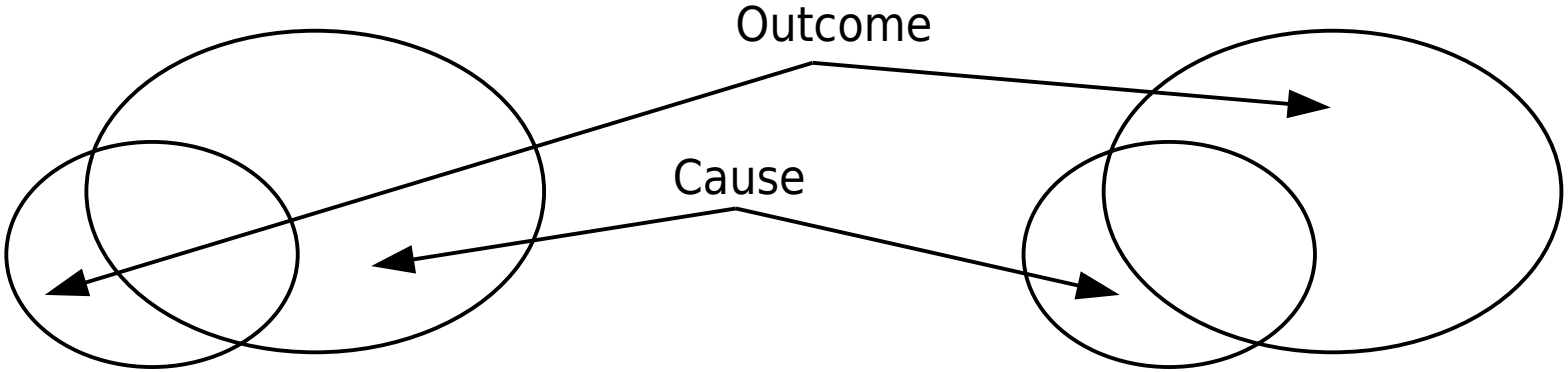
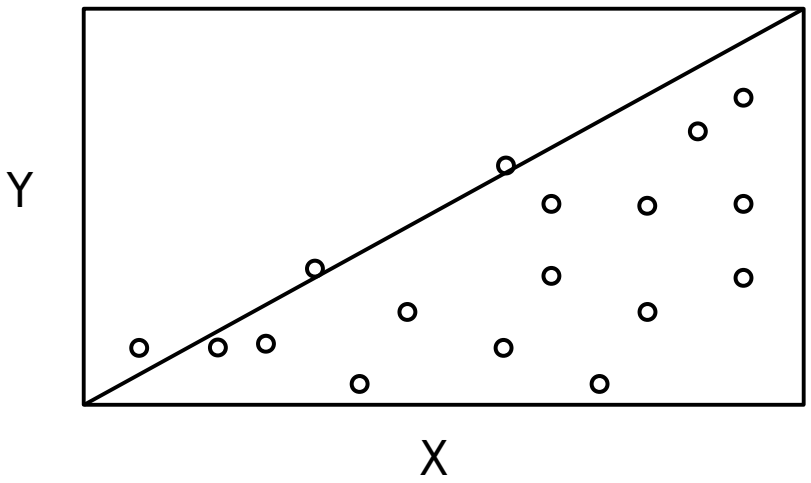
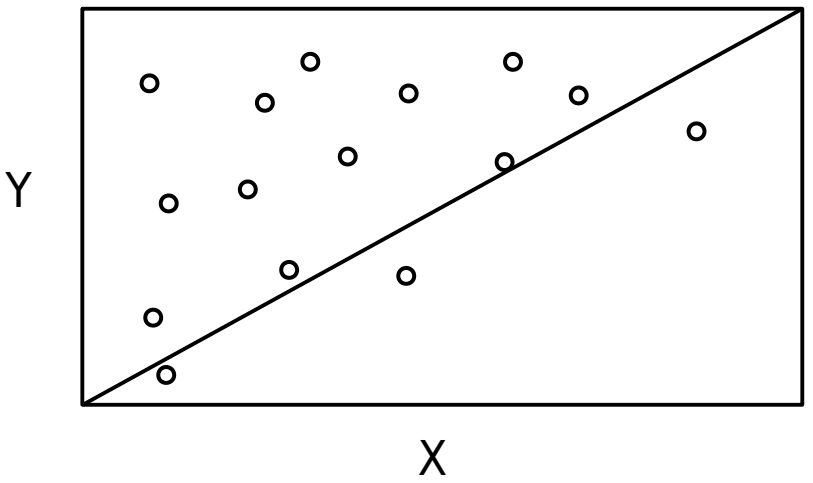




Subset relationship consistent with *necessity* (X≥Y)



Subset relationship consistent with *sufficiency* (Y≥X)

Invariant Relationships: Certain aspects of cases tend to co-occur

- Does not imply determinism (or stochasticism) and is not vulnerable to a single disconfirming case.
- Parallels how we typically understand causation, which is fundamentally set-theoretic:
  - A subset of people exposed to SARS-CoV-2 will contract COVID-19, whether vaccinated or not. But the overwhelming majority of serious illnesses and deaths occur among the set of unvaccinated individuals.
  - Don't smoke to avoid lung cancer; wear condoms to avoid STDs.
  - Academy Awards are awarded to films that are both popular and critically-acclaimed.
  - An intervention may work in one set of circumstances but not another (e.g., urban vs. rural environment; public vs. private hospitals)
- Is marijuana a "gateway" drug?

Software Demonstration
Example: Brown and Boswell (1995)

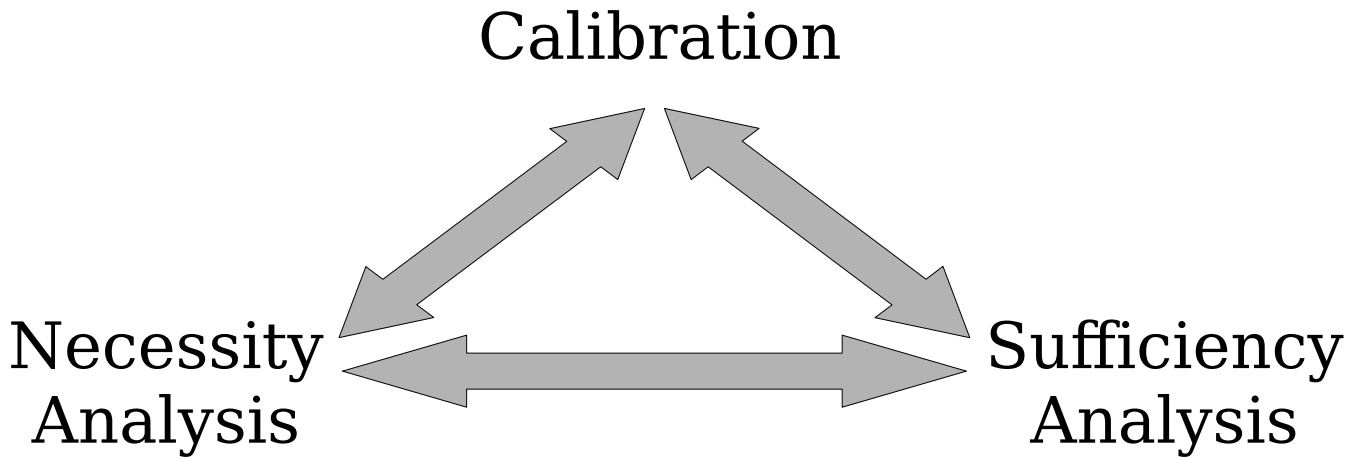
Distinguishing Features of QCA

- Fundamentally **set-theoretic**
- Assumption of **invariance**
- Assumption of **causal complexity** (“multiple conjunctural causation”)
  - **Cases as configurations** of conditions
  - **Multiple pathways** to the same outcome
- Explanations in term of **necessity and sufficiency**
- No degrees-of-freedom restrictions
  - Appropriate for **small-, medium-, and large-N analysis**
- Encourages **retroductive analysis** (iterating between theory and data)
  - Uses a **malleable analytic frame**
  - Must **calibrate** explanatory conditions and outcome
  - Data set must include both **positive and negative outcomes**
    — but see Ragin (2023) *Analytic Induction*
  - Identifying, understanding and resolving **contradictions** is key

QCA compared to conventional qualitative and quantitative analysis

	Qualitative Research	**Small/Medium-N QCA**	**Large-N QCA**	**Quantitative Research**
Distance from cases	Very close	Close	Distant	
Causal orientation	Causes of effects			Effects of causes
Causal reasoning	Mostly inductive	Retroductive		Mostly deductive
Population	Constructed			Given
Analytic frame	Very flexible	More flexible	Less flexible	Mostly fixed
Goal	"Telling about society" (Becker 2007)			
Types of Research Questions				
Identifying patterns	Rarely	Secondary		Primary
Testing/refining theory	Secondary			Primary
Making predictions	Rarely	Secondary	Primary	
Interpreting significance	Primary		Rarely	
Exploring diversity	Secondary	Primary		Secondary
Developing new theory	Primary		Secondary	

Three Analytic Components of QCA



Three Types of QCA Projects

(1) Uncovering causal recipes

- The most popular use of QCA, and how we typically describe the method's goal
- Seeks to identify invariant relationships, necessary and sufficient conditions

(2) Identifying taxonomies and types

- Based on truth table analysis
- Often engaged in “along the way” but can be its own end

(3) Analyzing context

- What are the conditions under which phenomena do, or do not, occur?