QCA: Strengths, Weaknesses, Policy Relevance

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Presentation Outline

- Clearing out some misconceptions on causality and causal inference
- Impact Evaluation questions
- Advantages and opportunities offered by QCA
- Requirements of QCA

Impact Evaluation as Causal Inference

- “You cannot establish causality unless you have a counterfactual”
- WRONG!
- At least THREE major Models of Causality and Causal Inference (Stern et al 2012, Befani 2012)
- Mill’s Methods
  - Difference, Agreement, Concomitant Variation, etc.
- Generative Causality
  - Mechanism-Based
- Configuration Causality
  - Multiple-Conjunctural

It’s not just about selection bias!

- Establishing causality (rigorously) equals **reducing selection bias** (between treatment and control groups): WRONG!
- This is only true within Mill’s Method of Difference
  - Certainly only true within single-cause models
- Multiple-cause models:
  - Does not mean (just) multiple variables
- It means causes are considered relevant as “packages”, or combinations, recipes
- QCA is underpinned by Configurational Causality / Multiple-Conjunctural Causality

Causal Models

- *Generative / Mechanism-Based* – we describe in detail the inner workings of a mechanism, focusing on a **single case**
- *Regression Analysis* – we focus on the additional contribution (multiplication, addition) of a **single variable** to an outcome
  - Proportional increase, like topping up something that we're running out of
- *Configurational* – we capture the complex, often unexpected "chemical" reactions that different causal factors undergo when they combine with each other
  - The same factor can have completely different consequences depending on what other factors it's combined with (**conjunctural**, **INUS** causality)
  - There can be different pathways to the same outcome (**sufficiency** without necessity)
  - There can be single conditions that are **necessary** for success but not sufficient

Impact Evaluation Questions

- Overarching question: *did the intervention make a difference?*
- Net effect question: **How much** of a difference did the intervention make?
  - Mill's Method of Difference, Mill's Method of Concomitant Variation
  - RCTs, quasi-experiments
- How question: **How** did the intervention make a difference?
  - Generative / Mechanism-Based Causality
  - Various TBE methods (Realist Evaluation, Contribution Analysis, Process Tracing)

Impact Evaluation questions (answered by QCA)

- *What made a difference, for whom and under what circumstances*?
  - Different factors have difference relevance depending on the context / what other factors they're combined with:
  - "conjunctural"
- *Was the intervention (or other factors)* ***necessary*** *for success*?
  - Or at least necessary under specific circumstances?
- *Was the intervention in itself* ***sufficient*** *for success*? If not, what are the **successful combinations of factors** / recipes?
  - There can be more than one (equifinality, multiple causality)

Questions answered by QCA (and their policy relevance)

- What works for whom, under what circumstances? What makes the difference for the outcome, where?
  - allows for **context-based, more "precise" policy advice**
- What conditions are conducive to which outcome?
  - Relevant because policies want to encourage, facilitate, trigger, change
- What prevents the outcome from materialising? What conditions are required for the outcome to materialise?
  - Necessary conditions can **unlock outcomes**, pave the way for outcomes to materialise, **key ingredients** that shouldn't be missing
- Which pathways, combinations, recipes, consistently work? Which don't?
  - **Safe bets**… vs. what needs to be **avoided**

Necessity & Sufficiency

- These recipes can be shown to be “sufficient” for the outcome
- **Good enough; doesn’t mean required**
- Some factors will be necessary but not sufficient
- **Required, but not good enough on their own**
- Some others are required for a recipe to be effective
  - But not required in general, just for that recipe (INUS)
- A number of cooking metaphors can be constructed…

In sum, QCA:

- Does not measure net effects
- Does not necessarily isolate the contribution of one intervention
- Seeks to identify successful combinations of factors
- Seeks to understand which factors made a difference under what circumstances
- Is qualitative: **works with qualitative constructs**
- Is **comparative** and **systematic**: synthesises information rigorously across a set of cases (> 5, though not a strict requirement)
- Allows different types of **generalisation**

QCA:

- If calibration is done properly, it's **replicable** / transparent and reliable / **stable**
- If the set of cases is representative of a broader population, it's **externally valid**
- Perhaps the major weakness is construct validity, but it can be handled with proper calibration
- For internal validity, it needs to be complemented with theoretical expertise or TBE methods
- **A tool to synthesise datasets used to answer the previous impact questions**

Requirements of QCA

- At least 5 cases (not strict)
- **Comparable cases**
  - Possibly the most important requirement, comparability can be tricky
- An expert of the substantive field to “make sense” of the configurations and create models (hypotheses) to test
  - A “sensemaker”
- Conceptual knowledge and technical skills
  - The ability to understand set theory
  - The ability to use the software platforms

Comparability

- Case-based information in QCA needs to be converted into numerical values
- Not real numbers, but either a 2-point, 4-point or 6-point scale (most often)
- The most popular version is a 2-point scale: presence / absence, 0/1
- This process is known as “**calibration**”
- Not all kinds of information can be described as such… only some types of qualitative and quantitative information

Thank you!

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