Seminar in Politics and Society
Collegio Carlo Alberto
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Case study methods in political science

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My ongoing research 1

- Social policy in the European Union

  - The social model of the EU as a polity in its own right
  - The social arrangements of the EU member states vis-à-vis the EU integration process

But…

SEMINAR IN POLITICS AND SOCIETY

Fall 2009 (Monday 17:00-19:00, Sala Rossa)

September 21	**Sergio Fabbrini**, *University of Trento* Behind Lisbon: the conundrums of European integration
October 5	**Stefano Sacchi**, *University of Milan and URGE* Case study methods in political science: recent methodological advancements
October 19	**Maurizio Ferrera**, *University of Milan* Social Europe at the crossroad

My ongoing research 2

i. Flexicurity arrangements (or lack thereof) in advanced political economies

ii. Distributional outcomes of dynamic interplay between labour markets and social protection systems

iii. Causal explanation of arrangements and outcomes

i&ii for Italy so far

To move to iii, detailed contextual and operational knowledge of selected cases >> small-N research

My ongoing research 3

Quality of democracy (in advanced democratic polities)

8 dimensions: 5 procedural (ROL, electoral and inter-institutional accountability, participation, competition) & 3 substantive (freedom, equality&solidarity, responsiveness)

Aims: analytically-informed state of the art, descriptive inference, if possible explanation of different positioning among advanced poliarchies

To start with, 6 large EU member states: detailed contextual and operational knowledge of selected cases >> small-N research

Research designs

How can we prove what we are saying?

"A research design is a plan that shows, through a discussion of our model and data, how we expect to use our evidence to make inferences" (KKV)

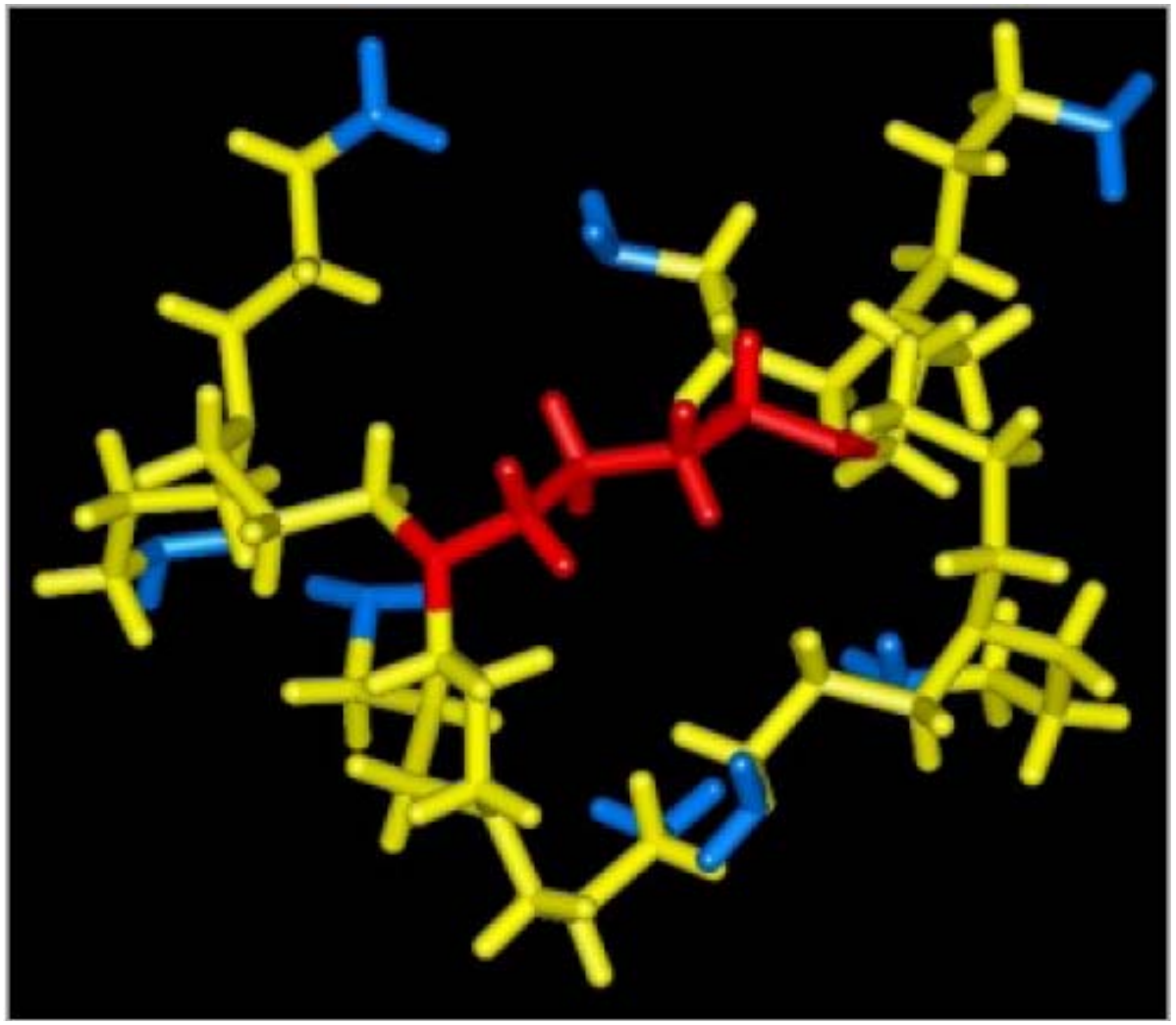
Research designs

- Research question
- Data gathering
- Case selection
- Methods

Two sources of leverage in causal explanation

- Large-N research
  - Variable-oriented (cases are boxes, filled with observations)

- Small-N research
  - Case-oriented (cases are complex constellations of historically-driven states over properties)



Case-oriented research: Two methods (or one?)

- The comparative method
- The case study method

- In US recent methodological writings, both are subsumed under the heading

"case study methods"

Still, there are differences

- More pronounced the larger the N (the more cases in the comparative study vis-à-vis the case study)

It can be shown that

- Neyman-Rubin-Holland operationalization of causality
- Experiments, problems of social experiments
- Statistical method (econometric models): strong assumptions needed
- Same logic applies to the comparative method

➢ BUT the case study method is generally treated as ontologically different

Presentation outline

- The comparative method: what it is, what its problems are
- The case study paradox
- Issues of definitions: what the case study is (And what it is not)
- What constitutes the basis for inference?
- Advantages and pitfalls of the case study method
- A plea for methodological ecumenism: it’s a jungle of trade-offs out there, babe

Established wisdom

- Classic argument (Lijphart 1971, 1975)
- Experimental method: the best, but rarely applicable in the social sciences
- Statistical method: second-best, but requires large N
- Comparative method faute de mieux: it mimics the statistical method

Lijphart 1975

- The comparative method can be defined as the method of testing hypothesized empirical relationships among variables on the basis of the same logic that guides the statistical method, but in which cases are selected in such a way as to maximize the variance of the independent variables and to minimize the variance of the control variables

The comparative method à la Lijphart

- Equated with the “comparable cases strategy”: importance of classifications!
- Most similar systems design as the research design
- Makes use of Mill’s method of difference (based on Mill’s second canon)

Mill’s second canon

- “If an instance in which the phenomenon under investigation occurs, and an instance in which it does not occur, have every circumstance in common save one, that occurring only in the formes; the circumstance in which alone the two instances differ, is the effect, or the cause, ar an indispensable part of the cause, of the phenomenon”

Better formulation

- Serves for eliminating hypotheses
- Nothing can be the cause of a phenomenon if the phenomenon does not take place when the supposed cause does

Method of difference

	POTENTIAL CAUSES (INDEPENDENT VARIABLES)										PHENOMENON TO BE EXPLAINED (DEPENDENT VARIABLE)
INSTANCES (CASES)	C1	C2	C3	C4	C5	.	.	.	CM		
1	1	0	1	1	0						0
2	1	0	1	1	0						0
3	1	0	1	1	0						0
4	1	0	1	1	0						0
5	1	0	1	1	1						1

examples

- Germany and Italy – similar welfare states, UB schemes introduced in the same period, with similar features, BUT different evolution and outcomes
- European countries late XIX century: all with roughly same problem pressure from modernization (industrialization) process, BUT social insurance schemes introduced in late modernization countries earlier than in early modernization countries
- Parties and patronage in UK, Germany, US and Italy

Does this exhaust “the comparative method”?

- Italy and Sweden: diverse welfare state models, interest organization models, political incentives to reform BUT same kind of pension reform in the mid 1990s
- Is this not a comparative framework?
- So the comparable cases strategy, or controlled comparison is just one instance of the comparative method

Method of agreement

- Nothing can be the cause of a phenomenon which is not a common circumstance in all the instances of the phenomenon
- Same outcome, different contextual variables, I look for a constant operative variable
- Most different systems design

Method of agreement

	POTENTIAL CAUSES (INDEPENDENT VARIABLES)										PHENOMENON TO BE EXPLAINED (DEPENDENT VARIABLE)
INSTANCES (CASES)	C1	C2	C3	C4	C5	.	.	.	CM		
1	0	1	1	1	1						1
2	1	0	1	0	1						1
3	1	0	0	1	1						1
4	1	1	0	0	1						1
5	1	1	0	1	1						1
.											
.											
N											

Joint method of agreement and difference

	POTENTIAL CAUSES (INDEPENDENT VARIABLES)										PHENOMENON TO BE EXPLAINED (DEPENDENT VARIABLE)
INSTANCES (CASES)	C1	C2	C3	C4	C5	.	.	.	CM		
1	1	1	1	1	1						1
2	1	0	1	0	1						1
3	1	0	0	1	1						1
4	1	1	0	0	1						1
5	1	1	0	1	1						1
6	1	0	1	0	0						0
7	1	1	1	0	0						0

examples

- Skocpol: MDSD explaining revolutions; outside negative cases similar to the positive ones; then explain divergences in post-revolutionary trajectories and outcomes
- Collier and Collier on labor incorporation in Latin America: 8 L-A countries (MSSD), they diverge in outcomes; then pairwise comparisons of couples similar in outcomes, different in contextual conditions

Problems with the comparative method

- Zelditch
- Lieberson
- Method of agreement: KKV and Geddes

Zelditch

- The comparative method is based on four rules:
  - Comparability
  - Method of difference
  - Method of agreement
  - Rule of one variable
- These rules are neither adequate, nor sufficient for intelligible comparisons

Zelditch

- They are not **adequate**:
  - Multiple causality, equifinality
  - Spurious relations

U ← W → V spurious: invalid

U → W → V indirect: valid (W intervening variable)

With both, Corr (U, V / W) = 0

  - Cancelling factors! Absence of empirical correlation DOES NOT ENTAIL absence of functional relationship

X → Y ← Z

\+ -

Zelditch

- They are not sufficient without being supplemented by subject-matter knowledge:
  - Analysis of factors prior to analysis
  - Choice of relevant factors to control for
  - Role of auxiliary hypotheses
  - A-priori assumptions are required in interpreting data (e.g. distinguish spurious from genuine correlations)

Zelditch

- There is no royal road to intelligible comparisons, a set of rules that even a fool could mechanically apply and be sure s/he gets a valid result
- Comparability is decided by:
  - Subject-matter knowledge
  - Purpose of comparison (research question!)
  - Theoretical analysis

Lieberson’s critique

The comparative method rests on four assumptions:

i) Determinism rather than probabilism

ii) No errors in measurement

iii) Existence of only one cause

iv) Absence of interaction effects

Mahoney's response

i) We can think of usually (quasi-) necessary and usually (quasi-) sufficient causes

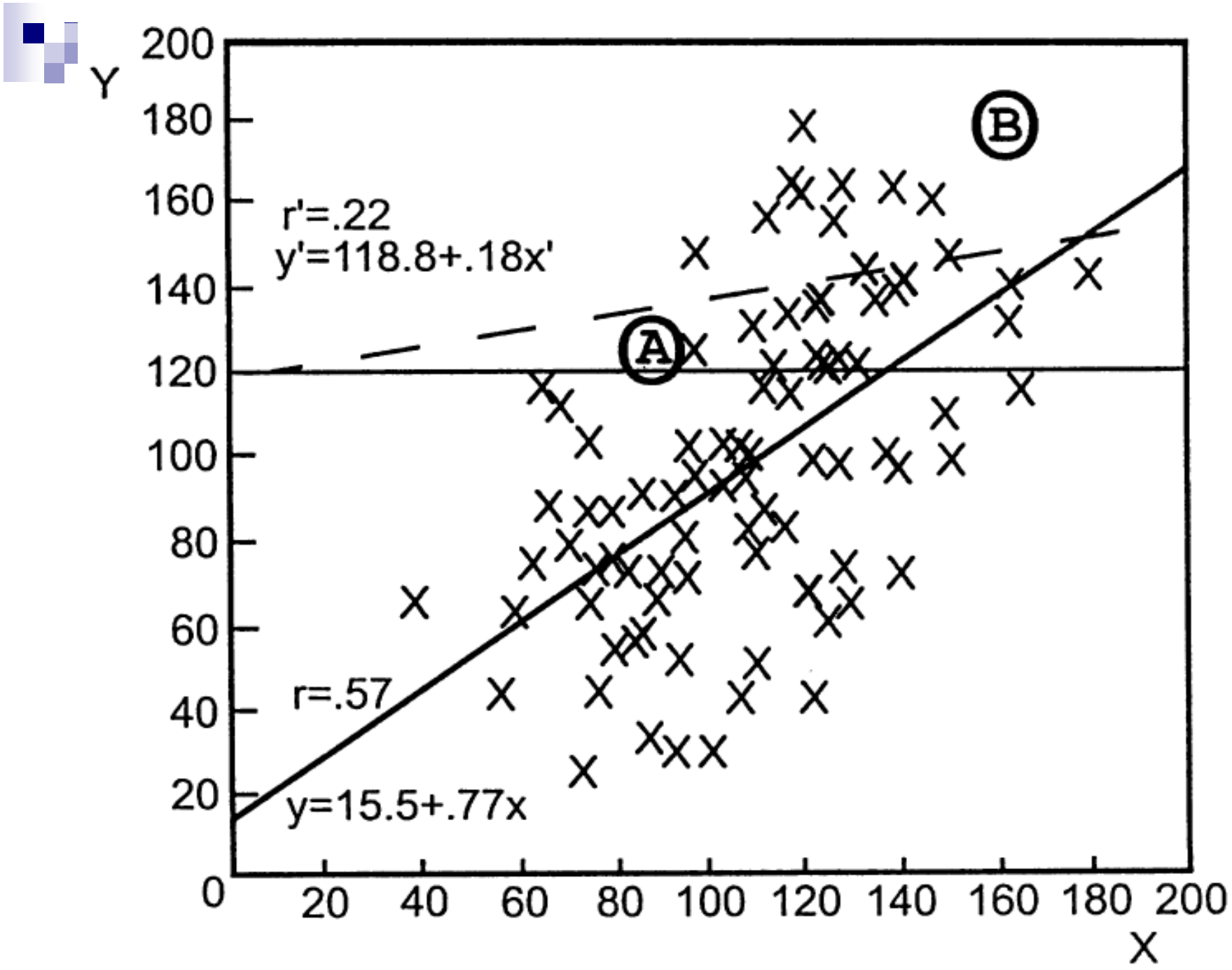
ii) Case oriented researchers have deep and detailed knowledge of cases

iii) Such researchers will generally look for causal factors operating in combination with others in a given population of cases, they will not go into the unexplored world like a boy scout in search of causes

However, the comparative method finds it difficult to assess the causal effect of variables taken in isolation, just as other methods find it difficult to identify constellations of necessary and/or sufficient causes

Selection bias

- 1. Truncation on the extreme values of the dependent variable
- 2. No-variance designs


Y
200
180
160
140
120
100
80
60
40
20
0
20
40
60
80
100
120
140
160
180
200
X
r'=.22
y'=118.8+.18x'
A
B
r=.57
y=15.5+.77x

1. truncation

- What are the consequences?

  Watering down the relationship: reduced slope

- Why do these consequences arise?

  Negative relation between the independent variable and the error term (distance from the original regression line)

  Standard regression confounds this relationship, due to truncation, with the genuine relationship between the dependent and independent variables

2. No-variance design

- Different logic of inference
- Fundamental tool for ascertaining necessary conditions, should not be used for sufficient conditions
- The “solution” may be worse: introducing causal heterogeneity

What is more “no variance” than the case study method?

- The case study paradox
- Issues of definitions: what the case study is (And what it is not)
- What constitutes the basis for inference?
- Advantages and pitfalls of the case study method

The case study paradox

- Wide diffusion, poor reputation: “the doormat of methodology”
  - Negative degrees of freedom
  - Indeterminate research design
  - Weak inferential leverage
  - Subjective conclusions
  - Non-generalizable results

The received wisdom

- “The scientific status of the case study is somewhat ambiguous, however, because science is a generalizing activity. A single case can constitute neither the basis for a valid generalization nor the ground for disproving an established generalization” (Lijphart 1971).
- “Analytic theory cannot do without case studies”, BUT “even though single case studies provide interesting insights, they do not *by themselves* provide clear guidance for generalization to other cases” (Achen e Snidal 1989)

Harry Eckstein, 1975

Ambiguity about what constitutes an “individual” (hence “case”) can only be dispelled by not looking at concrete entities but at measures made of them.

On this basis, a *“case” can be defined technically as a phenomenon for which we report and interpret only a single measure on any pertinent variable*.

This gets us out of answering insoluble metaphysical questions that arise because any concrete entity can be decomposed, at least potentially, into numerous entities

Arend Lijphart, 1975

Case studies [...] are intensive but uncontrolled examinations of single cases that cannot directly result in empirical generalizations and cannot even be used to test hypotheses.

The “cases” referred to here are not synonymous with the entities (countries, provinces, organizations, individuals and so forth) on which the observations are made.

A case is an entity on which only one observation is made and in which the independent and dependent variables do not change during the period of observation - which may cover a long time, even several years

What a case study is NOT

- Eckstein, Lijphart: a case is a row vector in the data matrix
- Case=observation
- Case study=study of a single observation
- Fallacy of equivocation: in practice, by “cases” researchers mean the units singled out to carry out the analysis

What a case study is
(Gerring, 2007)

- Investigation of “a single phenomenon, instance, or example”

- *Case* connotes a spatially delimited phenomenon (a unit) observed at a single point in time or over some period of time. It comprises the type of phenomenon that an inference attempts to explain. Thus, in a study that attempts to elucidate certain features of nation-states, cases are comprise do nation-states (across some temporal frame) (...). Each case may provide a single observation or multiple (within-case) observations.
- A *case study* may be understood as the intensive study of a single case where the purpose of that study is – at least in part – to shed light on a larger class of cases (a population).

Where does the useful variance come from?

The case under study always provides more than one observation. These may be constructed diachronically (by observing the case or some subset of within-case units over time) or synchronically (by observing within-case variation at a single point in time).

Cases	**Spatial variation**	**Temporal variation**	
		No	**Yes**
A) one	*None*	[Logically impossible]	Diacronic case study (I)
	Within case	Syncronic case study (II)	Syncronic and Diacronic case study (III)
B) some	*Across and within case*	Comparative method	Comparative historical analysis (CHA)
C) many	*Across case*	Cross-sectional	Time-series cross-sectional
	Within case	Hierarchical	Hierarchical time-series

Within case analysis

- Comparative (MSSD across subcases)
- Process tracing
  - An operational procedure for attempting to identify and verify the observable within-case implications of causal mechanisms
    - Non covariational
    - Causal mechanisms vs causal effects
    - Causes of effects vs effects of causes
    - Proximate vs distal causal factors
    - Refuses the N-D model at the principle inference level (but must it call it back in order to explain lower-order causal links?)

	Affinity	
	Case study	**Cross-case study**
Research goals		
1. Hypothesis	Generating	Testing
2. Validity	Internal	External
3. Causal insight	Mechanisms	Effects
4. Scope of proposition	Deep	Broad
Empirical factors		
5. Population of cases	Heterogeneous	Homogeneous
6. Causal strength	Strong	Weak
7. Useful variation	Rare	Common
8. Data availability	Concentrated	Dispersed
Additional factors		
9. Causal complexity	Indeterminate	
10. State of the field	Indeterminate	

Case studies for theory testing

- Process tracing power
- Bayesian interpretation of most likely and least likely case

Case studies for theory development

- Heuristic for theory building (emphasis on the context of discovery)
  - Tecniques of case selection
  - Typological theories

The elephant in the room: single-outcome studies

- If the case study method has a generalizing purpose (defining property, if we follow Gerring), what is left of causal analysis of specific events?

- Have we thrown out the baby with the bath water?

Table 1 Contrasting qualitative and quantitative research

Section	*Criterion*	*Qualitative*	*Quantitative*
1	Approaches to explanation	Explain individual cases; "causes-of-effects" approach	Estimate average effect of independent variables; "effects-of-causes" approach
2	Conceptions of causation	Necessary and sufficient causes; mathematical logic	Correlational causes; probability/statistical theory
3	Multivariate explanations	INUS causation; occasional individual effects	Additive causation; occasional interaction terms
4	Equifinality	Core concept; few causal paths	Absent concept; implicitly large number of causal paths
5	Scope and generalization	Adopt a narrow scope to avoid causal heterogeneity	Adopt a broad scope to maximize statistical leverage and generalization
6	Case selection practices	Oriented toward positive cases on dependent variable; no (0,0,0) cases	Random selection (ideally) on independent variables; all cases analyzed
7	Weighting observations	Theory evaluation sensitive to individual observations; one misfit can have an important impact	All observations are a priori equally important; overall pattern of fit is crucial
8	Substantively important cases	Substantively important cases must be explained	Substantively important cases not given special attention
9	Lack of fit	Nonconforming cases are examined closely and explained	Nonsystematic causal factors are treated as error
10	Concepts and measurement	Concepts center of attention; error leads to concept revision	Measurement and indicators center of attention; error is modeled and/or new indicators identified