

SOC497/L: SOCIOLOGY RESEARCH METHODS

Tuesday, September 9<sup>th</sup>, 2008

## Research Design:

### Methodology of Methodology

Ellis Godard

## Reminders

◆ **Readings:**

- Today: B 94-115
- Next: B 3

◆ **Due Dates:**

- HW2 due 1 week
- ECHW online; due 2<sup>nd</sup> to last class (no early bonuses)

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## Administrative Updates

- ◆ Handouts from Barrett
- ◆ Grading Report is up
- ◆ Should have received Weekend Update
- ◆ Pile of grading back on Thursday

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## Extra Credit Assignment

- ◆ Methodological research question
  - *Not* an empirical or theoretical question
  - Examples might include articles testing whether...
    - response rates vary between phone and mail surveys
    - changing a questions' wording changes the distribution of answers
    - Changing the question order affects item response rates.
- ◆ Will be due second-to-last day of class
- ◆ Will mean you have 10 assignments (9 after the lowest is dropped) rather than 9 (8 after the lowest is dropped)
  - Does *not* replace another HW; does *not* mean 3 grades dropped.
  - Just means that your pool of assignments is larger, so that any one low (or high) grade makes a proportionately smaller difference in your overall homework grade.

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## Updates to Schedule

- ◆ Combined Ethics & Design Labs
  - Lecture on ethics *after* look @ code
- ◆ Many HWs now "assigned" earlier (2 due earlier!)
  - Lectures earlier; could start earlier, even if forgot
  - All now 1.5 weeks apart – better spacing
- ◆ Labs better ordered
- ◆ More space before midterm (lab time etc)
- ◆ Stats ordered differently (means first)
- ◆ Key steps of research project earlier
  - Questions, administration, data entry, final data

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## Babbie 4

- ◆ Three purposes of research
- ◆ Causes and the three to remember
- ◆ Necessary and sufficient causes
- ◆ Units of analysis
- ◆ The time dimension
- ◆ The research process?
  - Follow on chapters

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## Quiz

- ◆ Four questions. Identify...
  - ...1 purpose
  - ...1 unit of analysis
  - ...1 point of focus
  - ...and one dependent variable that fits all three of your specifications

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## I. TYPES OF STUDY

*Identified in roughly this order...*

- A. Purpose of Research
- B. Focus of Research
- C. Units of Analysis
- D. Time Options

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## Outline for Today

- I. Types of Study
  - 4 things that you'll have to decide
- II. Process of Study
  - 8 steps, tho your process may be atypical
- III. Intro to Research Ethics

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## A. Purpose(s) of Research

- ◆ Overall: order facts, account for patterns of reality
  - amount of order already supplied puts a constraint on what you can add
- ◆ Three major purposes:
  - Exploratory (..)
  - Descriptive (..)
  - Explanatory (..)
- ◆ Two possible additions?
  - Methodological!
  - Evaluative? (Evaluation/Assessment)

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## Topic

- ◆ Test

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## Exploration / Exploratory Research

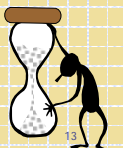
- ◆ Purpose:
  - Break new ground
    - satisfy researcher's curiosity, beginning familiarity
    - knowledge constraint on doing more than that
      - Empirically: don't know enough about pop or subject (AIDS '83)
      - Practically: don't know what you want to know (surfshops)
  - Prepare for future study
    - test feasibility of more extensive study
    - develop methods for subsequent study
- ◆ Practice: Seldom provide satisfactory answers
  - What student projects attempt to do
    - But may be more ambitious than seems @ 1<sup>st</sup>
  - Can't expect much rigor or precision
    - Problems w/ representativeness, operations, reliability
    - Aim = approximation?



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## Description / Descriptive Research

- ◆ Purpose: typically “who”, “what”, “how much”
  - seeks accuracy & precision, but rarely = only goal
- ◆ Process: comparisons, typically on single variable
  - Univariate – but could have subgroup descriptions
  - Inference – to pop, not just descriptive stats
- ◆ Practice: Used to describe situations or events
  - The U.S. Census is an example
  - Crime rates in different cities
  - Drug use among specific age groups



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## C. Units of Analyses

- ◆ Aka units of observation, level of analysis, etc.
- ◆ **Individuals**
  - B says requires knowing pop
  - But every level has a theoretical pop
- ◆ **Groups**
  - eg gangs instead of gang members
  - but may derive descriptions from members
    - race, gender, age diffs
- ◆ **Organizations**
  - formal (& usually larger)
  - e.g .churches, frats, college classes

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## Explanation / Explanatory Research

- ◆ Purpose: Bivariate comparisons
  - Descriptions for predictions
    - Describes, but w/ 2 vars simultaneously
    - When/where - Under what conditions?
  - Causal claim about a distribution/relationship
    - Involves ideas about causes & causation
    - Inferential (mechanistic?)
- ◆ Procedures: Criteria, Elaboration
- ◆ Practice:
  - = most difficult purpose
  - Highest levels require much experience

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## Units of Analyses, cont'd

- ◆ **Social Artifacts**
  - any product of social life, social beings, or their behaviors
  - E.g. editorials, songs, syllabi
- ◆ **Interactions**
  - not a product of social life, but social life itself
    - gossip, gifts, studying, weddings, court cases, traffic accidents, weddings, fist fights, riots
  - The only true sociological unit?
    - e.g dance - not what people do, but what a social structure does
    - perhaps short structures dance w less restraint (vs line dancing, ballroom, tango)
- ◆ Possible to have *no* unit of analysis
  - Pure sociology
  - but not at hypothetical level

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## B. Focus

- ◆ Characteristics
  - states of being, inc knowledge and demographics
- ◆ Orientations
  - a bit more vague
  - may be internal or cultural attitudes, beliefs in the head or at individual level
  - group purposes, policies
- ◆ Actions behavior
  - Individuals but also groups, etc.

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## Units of Analysis vs. Units of Observation

- ◆ Units of analysis are those things we examine in order to create summary descriptions of all such units and to explain differences among them.
- ◆ Know what are you studying
  - marriages or marriage partners, crimes or criminals, corporations or corporate executives., gangs or gang members
- ◆ Are usually also the units of observation
  - Tho sometimes we observe units of analysis indirectly
    - divorce and church attendance

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## Focus/Units Grid

- ◆ Focus and Units are not dependent on each other
  - Nor on topic area – you can study any topic in multiple ways
- ◆ It is possible to “map” one setting (e.g. record store) or topic area (who likes what music) across a grid:

	Characteristics	Orientations	Actions
<b>Individuals</b>	Age of purchasers	Aggressive? Deliberate? Slow?	Buy in bulk? Listen 1st?
<b>Groups</b>	Families, couples, friends		Shop together or regroup at end?
<b>Organizations</b>	Labels (major or indie)	Pop vs rap (something about cultural expression)	Sales or distribution practices
<b>Artifacts</b>	Records, checks		Receipts/wrappers
<b>Interactions</b>	Discussion loud, purchase speed	Meandering or direct shopping	Listen first?

## II. PROCESS OF STUDY

- ◆ Something of an ideal, but...
  1. Select Topic Area
  2. Conceptualization \*
  3. Choice of method \*
  4. Operationalization \*
    - specific measurement techniques and operations; replication?
  5. Theoretical Population & Sampling Procedure \*
  6. Make Observations / Collect Data
  7. Data Processing
  8. Analysis \*
  9. Applications

\* At least one later lecture is devoted to each starred topic

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## Beware Faulty Reasoning

- ◆ Ecological Fallacy
  - ecological refers to groups or sets or systems
    - The fallacy is applying something learned about the group to the individuals making up the group.
    - The army is strong. John is in the army, therefore, John is strong.
  - Assuming that knowledge of a unit implies knowledge about its parts
    - May do so tentatively, but can be big problems
    - Dems win in college towns – but PROFS vote, not young people
    - Unions esp stronger in cities – but the strongest opponents of unions are also in cities
      - = one reason the unions have to be strong there
- ◆ Reductionism
  - See earlier lecture notes...

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## Selecting your Topic Area

- ◆ What's required?
  - Assignment or Funding parameters
  - Topical or Analytical expectations
  - Audience needs and knowledge
- ◆ What interests you?
  - Connect w/ previous work/experience?
  - Explore something new?
  - Achieve something particular (e.g. publish)?
- ◆ What's available (data, theory, cases)?

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## D. Time Options

- ◆ Time
  - Not a given, nor limited – could study for many years
- ◆ Cross-sectional - “Snapshot” at one time
  - Problem: can't establish temporal precedence as easily; all data gathered at once
  - explanation difficult (eg time order? Alt explanations due to sampling / temporal bias?)
- ◆ Longitudinal: same phenomena, mult pts in time
  - trend studies (changes w/l same general population)
  - cohort (diff individuals but typically same age groups)
  - panel study (same precise individuals each time)

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## Conceptualization / Operationalization

- ◆ Concepts
  - Abstract, mental, vague/overarching
  - Refers to a class of facts or variables
- ◆ Operations
  - Specific (instructional)
  - Measurable (useful guidelines)
  - Variables (not constants)

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### Choice of Method

- ◆ will revisit later
  - part 3 in book, Observations section of syllabus
- ◆ Experiments
  - Classical
  - not done much but easier argument about causality
- ◆ Surveys
  - predominant mode of data gathering in sociology
  - closer to RW but still problems with accuracy:
  - can be "too numerical", perhaps artificial – also, responses themselves are a DV
  - easy to do once know what doing - jobs, skills, sclgy career
  - allows quantitative analysis, although others can, too

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### Methods: Spectrum of Artificiality

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### Choice of Method, cont'd

- ◆ Field research
  - may be observations, may be participant observation
  - takes years to do - eg Whyte 3.5 yrs for Street Corner Society, Elijah Anderson's 7yrs for *Streetwise*
- ◆ Unobtrusive Research - content, trace, or archival analysis
  - no contact with other humans
  - avoids interaction problems (rsrch/rsrchs) - no social context (?)
  - e.g. trace analysis = what pple leave behind - trash, fingerprints
    - museum - dirty carpet & floor tiles to measure exhibit popularity
    - store chain - fingerprints on glass - top for adult Interst, side for kids
- ◆ Triangulation - best to use more than one method
  - each has certain weaknesses & drawbacks
  - some affect obs, interp, analysis, or concs

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### How select method?

- ◆ More on this throughout term  
e.g. will look at costs of doing survey vs experiment
- ◆ Generally, choose method based on your needs/limits:
  - scientific limits, such as purpose:
  - if exploratory, then may need person-to-person probes
  - limited information, such as about the sample:
    - if difficult population, may need to telephone around to find folks
      - eg southern black preachers – snowball samples calling 9 states
  - in particular, could be resources:
    - if short on time, telephone can be quickest (hundreds per night, esp with large-scale calling facility)
    - mail the longest (2-3 weeks between 2 or 3 contacts)
    - if short on money, won't be able to afford person-to-person
    - mail may be cheaper IF: long-distance, & no hurry, & bulk rate (etc)

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### Methods: Spectra of Intensity

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### Population / Sampling

- ◆ must decide *whom* or *what* to study
- ◆ to what group do you want to infer conclusions
  - almost never able to study all of the members of our pop of interest, or all possible observations of them
  - more on sampling later
  - be careful to be explicit about:
    - pop of interest
    - how sampled
    - limits of sample (keep in mind kinds of conclusions you want)

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## Data Processing

- ◆ usually means putting the info into a computer for quantitative analysis
  - Data entry
  - Error checks (5-10% for entry errors)
  - Data cleaning (missings, indices, etc.)
  - Data validation (validity checks, etc.)
- ◆ may also mean other things
  - e.g. organizing field notes (more later)

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## In practice...

- ◆ Sometimes a different order (as in this class)
- ◆ Some items (e.g. method and population) may be prescribed for you (e.g. take a survey of customers; go call some clients)
- ◆ We'll collectively do these five steps, in labs:
  - Conceptualization – *will start soon*
  - Operationalization – *will have 2 labs for this*
  - Data processing – *will have lab time to do*
  - Analysis – *HW9*
  - Applications – *presentations & papers*

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## Analysis

- ◆ dealing with that in some coming labs & HWs
- ◆ Two lectures devoted to analysis, one each on quantitative and qualitative
- ◆ will also discuss analysis when address each method of observation
  - diff kinds of methods require or empower diff types of analysis
  - results may feed back and start another cycle of inquiry –

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## Applications

- ◆ Where do you put the findings?
- ◆ Written Reports
  - Executive summaries
- ◆ Oral Presentations
  - Classroom, courtroom, congress/committees, conferences, "job talks"
- ◆ Publicity
  - Press release to media, letters to stakeholders
- ◆ Discuss with others
  - students or colleagues

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## Intro to Research Ethics (more Th.)

- ◆ Voluntary participation
  - If you observe drinking at a party as part of your homework you did not have permission from those you observed!
- ◆ Do no harm
  - Some research may cause participants to question things as a result of your research, such as religious beliefs.
- ◆ Confidentiality (vs. anonymity)

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## Lab Exercise (due *start of next lecture*)

- ◆ Mini-research design
  - Topic
  - Temporal (time) issues
  - Ethical issues
- ◆ 3<sup>rd</sup> part is online (ASA Code via [www](#))
- ◆ Can do in groups of 3-5