SOC497/L: SOCIOLOGY RESEARCH METHODS

aka "Science in Softpants (Ellis' Version)"

Inquiry & Research:

Scientific Understanding

Ellis Godard

Announcements

- Spring 2025 Notetaker?
- Discord, GroupMe, group chats, etc.
  - Empower yourselves
  - Be collegial (let me know of issues?)
  - Don't commit academic dishonesty
- Session ID for quizzes
  - Different each day (*session* ID, not *semester*)
  - Will be my last name & in the Zoom chat
  - Always one slide up front, to make sure it works…

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Most people who say "do your own research!" don't know what research is and don't know how to do it

"Honey, come look! I've found some information all the world's top scientists and doctors missed."

How ready are you for quizzes?

A. Ready to roll – got all the pieces, yay! 100%
B. Have account & app, but no subscription yet 0%
C. Have account OR app, but no subscription 0%
D. Don't have any of the 3 needed pieces (the account, app, OR subscription) 0%

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Demo Dialectics Being Scientific Lab

Outline

- PointSolutions (quiz app) demo
- "Dialectics" of Research
  - Six (6) pairs of ideas
- All About Science
  - What it is, what it isn't
  - Anti-Scientific Ideas
  - + more, time permitting

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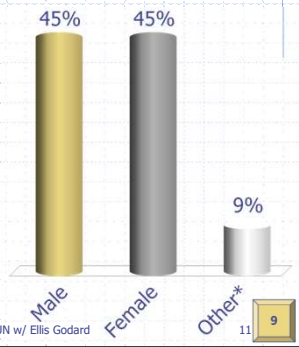
What is your gender?

1. Male
2. Female
3. Other*



* Neither sex nor gender is binary, regardless of what you think or what our Trump says or does. More on Feb 13…

Q1 How many dialectical pairs did Babbie give?

Trick question? ☺

A. 1 7%

B. 3 20%

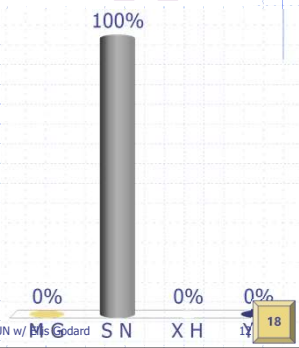
C. 6 60%

D. 12 13%

E. 37 0%

Which letters complete a school you all know: C_U_

1. M G
2. S N
3. X H
4. Y C



Dialectics of Research

- Empirical vs. Normative (…)
- Description vs. Comparison (…)
- Qualitative vs. Quantitative (…)
- Confirmation vs. Falsification (…)
- Prediction vs. Determinism (…)
- Induction vs. Deduction (…)

How much of the reading did you do?

1. All of it, and took notes 16%
2. I read all or most of it 37%
3. I skimmed parts of it 26%
4. I'm aware of it 11%
5. I didn't even think about it 11%

1. Empirical vs. Normative

- Empirical = what is
  - Claims about reality
  - Scientific Ideas
    - Description & Explanation
- Normative = what ought to be
  - Not a function of facts
    - Science cannot tell use what *ought* to be… despite what some sociologists pretend

Value Neutrality

- Science is Value Free
  - Science can *study* norms, w/o bias (Weber)
  - Values may *affect* science (Dahrendorf)
    - Inc. choice of problems
  - But science is not *based* on values
    - The final arbiter is data – observed "facts"
- Critical in Sociology
  - Studying processes that "have meaning"
  - Want to study diverse behavior, not *judge* it

2. Description vs. Comparison

- Idiographic: explaining *an* instance exhaustively
  - E.g. describing a specific juvenile gang
  - Qualitative work / Anti-positivism
- Nomothetic: Explaining a *class* of instances
  - You do better when you study w/ a group, your favorite team does better @ home, factors leading to delinquency, etc.
  - Seeks to explain "economically," using few factors
  - Objection = lose complexity, "gloss over" differences
    - But that's the *point*
      - We *want* to compare similar things based on their differences – so we *need* to identify commonalities *and* differences
      - Reductionism is not a *bad* thing – it's a *useful* thing!

3. Qualitative vs. Quantitative

- Quantitative is numeric
  - Makes observations more explicit, easier to aggregate, compare, and summarize.
  - Indicator of the maturity of an idea
    - Something can now be counted
  - But even more/less is a quantity
- Qualitative is non-numeric data
  - Richer in meaning (?), but subject to ambiguity
  - Simply immature science?

4. Prediction vs. Determinism

- Determinism ~ billiards
  - No "free will"
  - If X, then Y, period – no exceptions
- Science is probabilistic in nature
  - Y is more likely given X
  - Y happens more when X happens

5. Confirmation vs. Falsification

- Confirmation ~ Validation
  - Find support for an idea
  - Deem it "true"
- Science focuses on Falsification
  - Support for an idea might be easy to find
  - Want to look for contradictions
  - If can't find any, idea is supported
  - Want ideas that could be shown wrong

6a Inductive Reasoning

- Moving from the specific to the general
  - Evaluate all your test scores, types of tests, when taken, (am or pm), type of test, etc. and come up with a pattern in which you did your best
  - Observations > Hypos > Props > Theory
- In qualitative: "General Theory"
- In quantitative:
  - "empirical generalization" (Mills)
  - "dry/dusty" (crime/poverty; data mining)

6b Deductive Reasoning

- Moves from the general to the specific
  - Apply generalized ideas to specific situation
- Theory > Proposition > Hypothesis > Data
  - Law varies with inversely w/ status of deviant >
  - Lower status persons more likely to be arrested >
  - Expect low incomers more likely to have a record >
  - Collect data & test the idea

Q2 Babbie gives how many ways of knowing?

A. 1

B. 3

C. 6

D. 12

E. 37

Scientific Inquiry in a nutshell

- Observe Social Regularities
  - Who votes which way
  - Who earns more money
  - How do we drive
- Order observed patterns
  - Generalize from samples
  - Conceptualize variables
  - Simplify complex data into summary ideas
- Despite critiques, never absolute
  - Dismiss w/ "determinism"
  - Always probablistic
  - Always tentative – *invites* contradiction...

Science is Systematic

- Analogues to science all the time in everyday life
  - Try to make sense of reality
- Similar problems, too
  - ignore evidence, casual/anecdotal, etc.
- Science tries to reduce probs thru procedures
  - Study design, sampling, measurement, data collection
  - But range of choices, and variety of choices
  - Usually up to individual researcher, w/i parameters

Human Inquiry

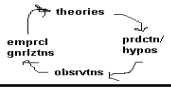
- Do all the time, w/o thinking
  - Predict future from Past & Present
  - Aim to answer what, and why
- Six Ways of Knowing
  1. Tradition – Galileo
  2. Authority – realms of expertise
  3. Mysticism (faith) – but often mixes Normative & Empirical
  4. Personal Experience
  5. Intuition – the "feels" you get; what "adds up" to you
  6. Science
     - Has issues, inc traditions and authorities
     - But the only way of knowing that's willing to be wrong

Scientific Ethos

- Be willing (systematically) to be wrong
  - Falsification & testability
- Empirical (what is)
  - vs. normative (what should be)
    - social class, racial profiling, inequality, etc.
  - Social science *cannot* settle value debates
    - Facts imply nothing about values
    - Sociological expertise is not morally informed
      - Much less superior

Scientific Model

- "Built" on two "Pillars"
  - Theory: logical aspects
  - Data collection: observational aspect
- Bridging the Pillars
  - Proposition: Concept > Concept
  - Hypothesis: Variable > Variable
- Wheel of Science
  - Deduction: theories > hypotheses > observations
  - Induction: observations > generalizations > theories



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Lab: Empirical Claims

- Find a *news article* online
  - Looking for an *empirical* claim
  - Try cnn.com or foxnews.com
    - (On campus, we usually use copies of the *Sundial*)
- Claims & Evidence handout from Canvas
- Group lab, due Fri 10pm
- Temp. Breakouts for Today
  - Intake form will guide starting next week

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Criteria for Evaluation

- Falsifiability
  - ideas *must* be testable (in principle)
- Valid
- Simple
- General
- Original

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Breakout Rooms

- Random today – still need Intake Forms!
  - Pre-assignments are by the email address you used to login to Zoom – I need that ASAP!
- 10 rooms, 4-5 students each (inc. M&W)
  - AmongUs
  - BingoBlitz
  - Call of Duty
  - CandyCrush
  - MarioCart
  - Minecraft
  - Minesweeper
  - PokemonGo
  - SimCity
  - Solitaire

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Q3. Which criteria is most important?

1. Generality 0%
2. Falsifiability 0%
3. Originality 0%
4. Simplicity 0%
5. Validity 0%

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Q5 Which criteria is most important?

1. Generality 0%
2. Falsifiability 20%
3. Originality 0%
4. Simplicity 0%
5. Validity 80%

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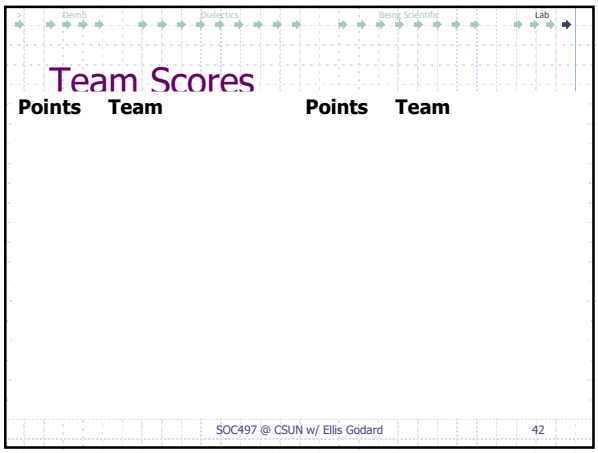
Demb
Dialectics
Being Scientific
Lab
Team Scores
Points Team
Points Team
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