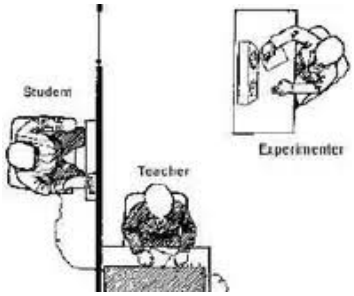
Experiments

- Seminal experiments (Psychology)
  - E.g. Milgram's obedience experiment
    - Can we run any experiment? What if benefits are extremely large? (e.g. answering a fundamental scientific question) – remember some of the Ethics we talked about



https://www.simplypsychology.org/milgram.html

Experiments

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- Type of experiments
  - Natural experiments
  - Field experiments
  - Quasi experiments (we will talk more about this later on in the course)
  - Lab experiments

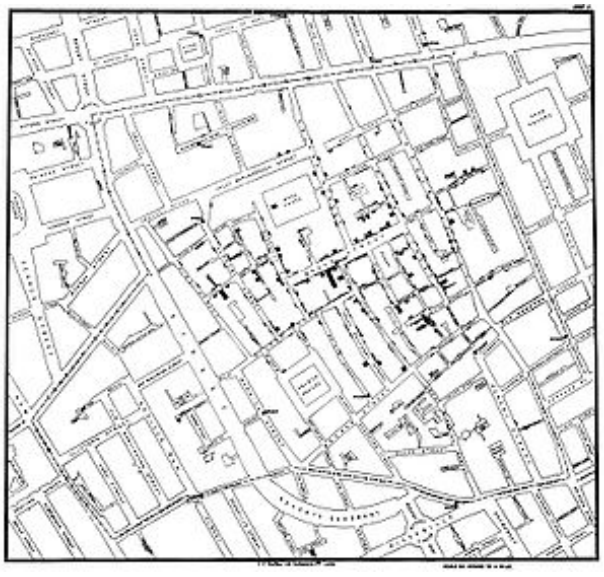
Asch's conformity experiment

Ver

Natural experiments

- Example: Dr. John Snow and Cholera (London, 1854)

- 500 deaths in one month
- Preconception: Transmission was caused by pollution
- The dots show clusters of cholera cases
  - Cases of cholera were near by the pump
- He realized that the outbreak was spreading because of contaminated water



Natural experiments

- Another example:
  - Effect of daylight saving on traffic accidents (Sood & Ghosh, 2007)
    - Data: 1976-2003, natural experiment: 1986 law changed the time when states switched to DST
    - Result: no short-term effect, positive long-term effect
- Experimenter has no control over an external alteration
- Advantage
  - Behavior is by definition "natural"
- Disadvantage
  - Many times there is no random "assignment," and researchers have to "demonstrate" causality

Field study experiments (example)

- Question: Are people averse to overhead in charity donations (Gneezy, Keenan & Gneezy , 2014):
- Program cost was $20,000
- Random assignment (N = 40,000)
  - Control
  - Seed (private donor: $10,000)
  - Match (up to $10,000)
  - Overhead (donor: $10,000 for overhead)

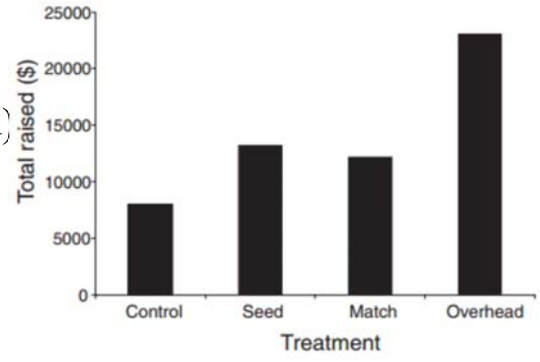


Fig. 2. Total amount raised by treatment.

- Question: Why?

Field experiments (example)

- Question: Can descriptive norms (what other people do) increase towel reuse (Shultz et al., 2008):
- Condo units (each stay = 1 week)
- Random assignment
  - Treatment: "75% of hotel guests choose to reuse their towel each day"
  - Control: Standard message
- They found: large reduction in the number of towels used
- Question: Why?

Field experiments

- Advantages
  - Real-world behaviors
  - It allows to examine measures hard to test in the lab (e.g. energy usage or voter turnout in an election)
  - "Gold standard" in social sciences
- Disadvantages
  - Costly
  - No controlled setting (greater chance of noise)
    - Need for larger samples
  - It may be hard to answer the "why"
  - Difficulty to replicate
    - E.g. get permissions