POIR 613: Measurement Models and Statistical Computing

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Today

1. Solutions for last week's challenge
   - Challenges should be challenging
   - But don't spend days on them
   - Won't be able to grade, but email with questions
2. Reminder: project idea due on Friday
   - One-paragraph summary of your project: research question, argument/hypotheses, methods, data, expect contribution, references.
   - Due via Blackboard (*Assignments* tab)
3. Experimental research in the digital age
4. Efficient programming in R
5. Parallel computing

Experimental research in the digital age

Experimental research in the digital age

Chen & Konstan (2015): Field experiments combine the control of laboratory experiments (high internal validity) with the generalizability of a real setting (external/convergent validity).

Challenge: cost, particularly if scale is sufficient to study high-variance social phenomena.

Online communities present a practical and cost-effective venue for conducting field experiments.

Given sufficient access and existence of software that allows randomization, researchers can study both short- and long-term effects of manipulations

Experimental research in the digital age

Experimental technologies for online interventions:

1. **Email and text messages**
   - More likely to get subjects' attention
   - e.g. Blair *et al* (2017): randomized text messages in India to encourage people to report corruption

2. **Modified web interface**
   - Manipulation: platform features, exposure to information, display of specific web elements, etc.
   - e.g. Bakshy *et al* (2012): social cues on FB ads

3. **Bots**
   - Program or script that makes automated requests
   - e.g. Munger (2016): reducing harassment on Twitter

4. **Add-ons**
   - Additional software that nudges or tracks subjects
   - e.g. Guess (2016): web tracking software to observe individuals' news consumption in response to monetary encouragement to seek information

Experimental research in the digital age

Limitations of online experimental research:

1. Varying degrees of access
2. Recruitment and informed consent
3. Compliance in context of peer contagion
4. Need to have multiple control groups, A/A tests
5. Replicability and data protection