Field and diary studies

Michelle Mazurek

Some slides adapted from Lorrie Cranor, Blase Ur, Vibha Sazawal
Administrative

• HW1 almost done grading
• HW2 out soon
• Course project discussion soon! (2/28)
FIELD STUDIES
What is a field study?

• Study (observation) vs. (quasi) experiment (treatment)

• Observations from uncontrolled but real(istic) conditions
Why a field study?

• Observation:
  – As inductive hypothesis generation

• Experiment:
  – Better ecological validity
  – Validate a lab study result

• Because you can’t get the data any other way!
Why not a field study?

• Logistically difficult
• Limited piloting / not easy to adjust
  – One shot at your participant pool
• Expensive (money and time)
• Researcher may influence outcomes

Plan extremely carefully!
Field observation

• Thorough, systematic classification of events + relationships

• Ethnography: Rich, qualitative description; quotes. “Embedding.”

• Enumeration: Counting things (e.g., web-scale measurements. Could also do in person.)
Important questions

• Who/what to observe, and why?
  – Expectation of interesting-ness
  – How is your observation biased (who/what don’t you observe?)

• For how long?
  – Trad. Ethnography: years of embedding
  – HCl: “rapid” or “mini” ethnography

• Researcher role?
  – Observer. Participant? (Consider e.g. dark web)
Researcher as participant

- Not expert or adviser!
- Observe before involving/asking too much
- Detailed field notes!
  - Who, what, where, when
  - Quotes
  - Anything confusing

- ... ethnography, lots of details we won’t get into in terms of how to do it correctly
Field experiments

• Logistically, harder to pull off
  – Unless you are for example Facebook
  – Can find smaller instances (usually quasi)
  – Occasional before/after instances (software patching, encryption stuff)

• Consider impact of being observed (if known)

• Consider biases in who/what is measured
PhishGuru in the real world

• Anti-phishing training delivered when users follow a phishing link

• Training, phishing, legitimate emails delivered to 300 employees in a Portuguese company
  – Over several weeks

• Why a field study, is this necessary?

Kumaraguru et al, eCrime Summit 2008
Logistical problems

• Didn’t include a legitimate email before training to compare click rates
• Control and experimental not 100% parallel
• Participants talked to each other, sharing the training materials
• No one turned in the post-study questionnaire!

• How could these have been avoided?
Another flavor of field study ... ish

DIARY STUDIES
Why do a diary study?

• Rich longitudinal data (from a few participants)
  – In the field … ish

• Natural reactions and occurrences
  – Existence and quantity of phenomena
  – User reactions in the moment rather than via recall
  – Less social desirability, maybe
How to do a diary study?

• Interval-contingent
  – Will they remember?

• Signal-contingent
  – Reminder but intrusive

• Event-contingent
  – Also memory issues
  – Can be best depending on topic at hand

• Paper vs technology-mediated
  – Collect some things automatically!
Experience sampling (ESM)

• A kind of signal-contingent diary
• Can be a reminder to create an entry; can create an event to respond to
• Send participants a stimulus when they are in their natural life, not in the lab
Lots of work!

- Often training and briefing/debriefing
- Consistent work over time
- Requires commitment from participants
Diary / ESM best practices

• When will an entry be recorded?
  – How often? Over what time period?
• How long will it take to record an entry?
  – How structured is the response?
• How long is the commitment?
• Stress motivation / completeness
• Pay well
  – Pay per response? But don’t create bias
Screen time study (from HW1)

• What worked and what didn’t?
• Thoughts about experimental design?
Other diary references

• Facebook regrets -- Wang et al, SOUPS 2011
• Location sharing (ESM) – Consolvo et al, CHI 2005
Activity

• In small groups
  – Design a field or diary study
  – Think about logistical/planning issues