ADMINISTRATIVIA

• Team formation now done – see me today if you think otherwise

• MSI release on Canvas on Friday evening – average 71.5
  – Low, but consistent with previous years

• MSII was released in works
  – Blog update #1 was due this morning
  – Report and blog update #2 due two weeks from today
  – Example MSII from prev. year *may* be posted to Piazza.

• TCPS due this week!
  Submit via Canvas by whichever is earlier:
  • Friday @ 10am
  • OR before you start running subjects
FIELD STUDIES III - LEARNING GOALS

- Interaction analysis (+ activity)
- Using video for data collection
- will consider some of the discussion questions for the Porcheron et al. paper throughout
RECALL: DATA ANALYSIS

• circulate notes and transcriptions among team
• hold video analysis sessions
• **identify patterns:** in behaviour, events, artifacts, within and across individuals
• common techniques:
  – coding data
  – affinity diagrams
• **triangulate** data where possible
  – Porcheron et al: examples of how is data triangulated?
Recall: Coding Data

- **Coding**: technique where you label chunks of data to describe what you see happening.

- can code many kinds of data, e.g.
  - text in field notes and transcripts
  - events or sections of video

- goal is often to identify themes, categories, patterns in behaviour, artifacts, events, etc.

- affinity diagramming often used to look for commonalities

- **open coding**: themes, categories, etc. are ‘discovered’ while you are going through data

- **closed coding**: you know what themes and categories you want to look for examples of *before* going through data
USING VIDEO FOR DATA COLLECTION
WHY VIDEO?

• Porcheron et al.: what was the benefit of using video data and interaction analysis for this research?
  – what might not have been found from interviews or in-person observations alone?
WHY VIDEO?

pros of video:

– data about what **actually happened**, rather than accounts of what happened (not subject to secondary interpretation)
– relatively **consistent bias**
– **permanent primary record** rich in detail – repeated viewings can uncover patterns not seen initially
– capture **complex interaction** data in a way that would be impossible for a single observer

cons of video:

– can be **time-consuming and labour intensive** – degree depends on transcription intentions

more detail Jordan & Henderson reading, Section 3 ...
LIMITATIONS TO VIDEO

• transformation of objective reality, rather than objective reality itself
  – limits of the camera operator: deciding what to capture (can mitigate through multiple cameras in permanent positions, but results in more data to analyze!)
  – limits of the technology: more restricted than human sensory system

• (perception) subjects adjust behaviour
  – in reality, subjects habituate very quickly, especially when operator not present

more detail Jordan & Henderson reading, Sections 4 - 5 ...
RANGE OF USE

• in the field:
  – often used as the primary data collection
  – observational notes may be taken as well

• in the lab:
  – can be primary, but more commonly secondary
  – as secondary, researchers want a backup to allow exploration of isolated/selected interaction segments (useful if coded and timestamped in an observation sheet for cross referencing)

key point: the more qualitative in nature the study, the greater the likelihood that video should be used
STANDARD USABILITY LAB SETUP
INTERACTION ANALYSIS

• an approach to analyzing video that involves some ‘coding’
  – described in more detail in Jordan and Henderson reading
  – is it intended to be open? or closed? in its approach to coding?

• analysis generally collaborative, done in groups
  – benefits of collaborative viewing/analysis? (sec. 2.3)

• uses analytic foci as way to identify things that are commonly useful to look for
  – but not meant to be strict coding categories
Analytic Foci

• summary provided as a worksheet
  – detailed in Jordan and Henderson, Sec. 6

• Porcheron et al.: what are some examples of *analytic foci* that likely guided the authors in their interaction analysis?
Activity – Video Analysis

video here: https://youtu.be/Jirm3sS-UZI

Step 1: Interaction analysis activity (15 min)

Step 2: Affinity diagram activity (15 min)

END: Groups present most interesting observation (10 min)

Discussion about merits/weaknesses of interaction analysis

Step 3: Design Brainstorm (If TIME)
ACTIVITY — THINGS TO CONSIDER

If you’re feeling stuck, consider some of these questions:

– How is ownership established in this workspace?
– Do teammates ask for help? How do they do so? When do they do so? How do others respond?
– How do the participants go about solving this puzzle? Piece-wise? What is the strategy they adopt?
– How does the dialogue affect the puzzle solving? Does it help?
– How are pieces placed on the table?
– How are gestures used in this task?
– How well do these people know one another? How does it affect the way the task proceeds?
Discussion Questions to Consider

• What happens when there are hundreds of hours of video? How do you approach analyzing that data?
• How do preconceived notions play a role in this kind of analysis?
• Could you do this kind of thing without video?
  – What /could/ you do without video?
• What other questions do you have now that you have seen the video a few times?
NEXT TIME

• Lecture will cover:
  – intro to experiments

• prep posted by Thursday
  – one reading + Stage I of a tutorial (*allow more time*)
    • both evaluated with a quiz; no open-ended questions this week
  – many of the statistical concepts in Newman & Lamming should be review from stats prereq