

# 85-102 Lab Notes Refactor

## Lab 1 Exercise and Cognition

See also operational definition in lecture.

Just some preview for next lecture on Methods in Neuroscience.

## Lab 2 Lateralisation

**Lateralisation:** left and right brain do different things. ex. left visual field processed by right hemisphere and vice versa

**Lesioning:** when a part of the brain gets damaged

- unilateral: on one side
- bilateral: same place damaged on both sides

**Expectancy effects:** hypothesis bias the outcome. Participants know what to expect → they do something different

Interpreting lateralisation results: slower response time on right visual field ⇒ process take place in right hemisphere, vice versa.

## Lab 3 Attention 2022-09-21

Test Your Awareness: Whodunnit ← interesting vid with things changing but not noticed by brain

- Types of attention
  - divided : several tasks sync
    - there might be some stimuli that we respond to, like your name and fire
  - selective: focus on one, ignore the others
- capacity theory
  - we've limited amount of capacity
  - simpler task, less attention needed
  - increase breadth ⇔ cost depth of attention
- Stroop test for testing auto reading
  - color matching colour word vs color not matching colour word

## Lab 4 Working memory

**Goal:** examine the connexion between phonological loop and visuospatial sketchpad

Working memory: digit span  $7 \pm 2$

Interaction: when two variables work together to affect the dependent variable.

Trick to determine if there is interaction (should be good enough):

1. Connect top of bars with same colour
2. Extend lines
3. If cross - interaction; if parallel - no interaction

## Lab 5 Judgement 2022-10-05

- wisdom of crowd & the crowd within
- shortcuts people take
  - sample less information
  - memory-based - making the same judgement as last time
  - anchoring & adjustment - from known reference point and adjust from there (e.g. using Celcius)
  - satisficing - choosing the first acceptable one
- wisdom of crowd
  - average over the crowd tends to be closer to true value?
  - estimate = noise + signal + bias
- crowd within (see also inside out for literal crowd within)
  - multiple guesses from same person
  - think of it like debate going on inside individual's brain

## Lab 6 Nudges 2022-11-02

- Choice architecture. How human/environment factors affect behaviour
  - Designing for human to incentivise a behaviour
  - Reduce speeding: put lines on road that drivers feel—lines closer, they feel it's getting faster, so they slow down
- Some human factors
  - **Ease** of use
  - **Confusability** of use
  - **preventable errors** when used
    - Optimal even if human suboptimal (laziness, cognitive shortcuts, emotion, stress, distraction, etc.)

- Economics model
  - Information → utility maximising behaviour
    - e.g. information: speeding will get fined; behaviour: ppl not speeding
  - Not the best model
- Psychology model (Rob MacCoun)
  - A lot more complicated!
- NUDGES (1 is economic, 2-6 psychological)
  1. make iNcentives salient
  2. Understand mappings (consequence of choices)
  3. Defaults (answer already filled in. people more likely to not use effort to opt in)
  4. Give appropriate feedback
  5. Error tolerance/prevention
  6. Structure complex choices

## Lab 7 Social Influence 2022-11-09

Back in the days everyone wanted to buy white pearl and black pearl didn't sell. Boss: half the price; but person misheard and doubled price. Turns out more people ended up buying black ones. This sounds like psychological thing rather than economic.

Strats to change what someone else value! See reading.

## Lab 8 Individual Differences 2022-11-16

- **theory of behavioural residue** - using things person leave behind to infer things about them.
- **snooping strategies** - infer things about person based on their place and things.
  - e.g. look at a person's office to tell if they are conscientious.
- **coding scheme** - turn qualitative data into quantitative data.

## Lab 9 Social Cognition 2022-11-30

Priming + implicit measures to associations tied to a social group.

- explicit measures: ask directly. but they may lie or they may not recognise what they think
- implicit measure: not ask directly, but make them do task that may use the association

## **Lab 10 Psychophysiology 2022-12-07**

Galvanic skin response—using sweating on fingers to indirectly measure psychological states