PSYC2014 NOTES

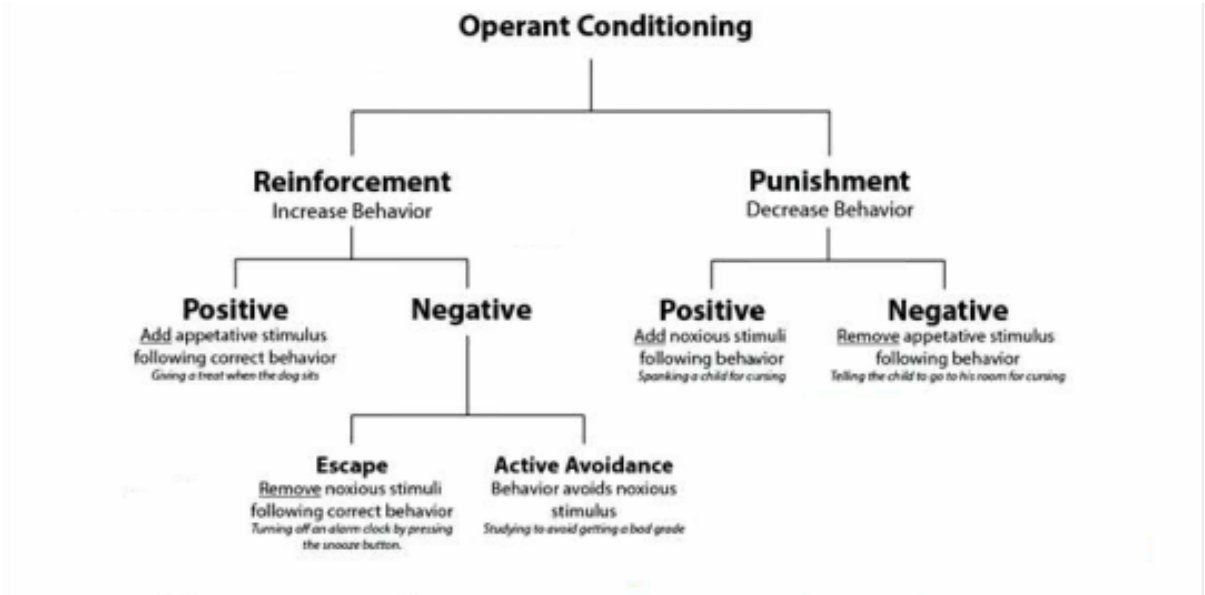
CONDITIONING

Topic questions for Lecture 1

- what is classical/pavlovian conditioning?
- what is instrumental and free operant learning?
- what is the difference between classical and instrumental learning?
- what do CS, US, UR, Sd, Operant, Rf mean?
- What are the different types of reinforcement and punishment
- What do S, R, O, S* mean?

BEHAVIOUR

- Experimental analysis of behaviour
  - Explanations for behaviour passed from philosophy to science, theology to naturalism, and speculation to investigation - Bolles, 1967
- Main types of contingencies
  - Classical conditioning - Pavlovian conditioning
    - Pairing stimulus with response
  - Instrumental learning - free operant learning
    - Tripartite contingency - the ABC
      - Antecedent: the stimulus controlling behaviour
        - The Discriminative Stimuli (sd)
      - Behaviour: what is the response being reinforced
        - The operant - the precise aspect of the response that determines reinforcement
      - Consequence: what is the immediate outcome of the behaviour
        - The reinforcing stimulus (sr)



instrumental learning

- S* - indicates a biologically significant stimulus
  - A stimulus can act simultaneously as a CS, and an SD and a US can also be an Sr etc.
- S-S, S-S* or S-O learning = classical conditioning

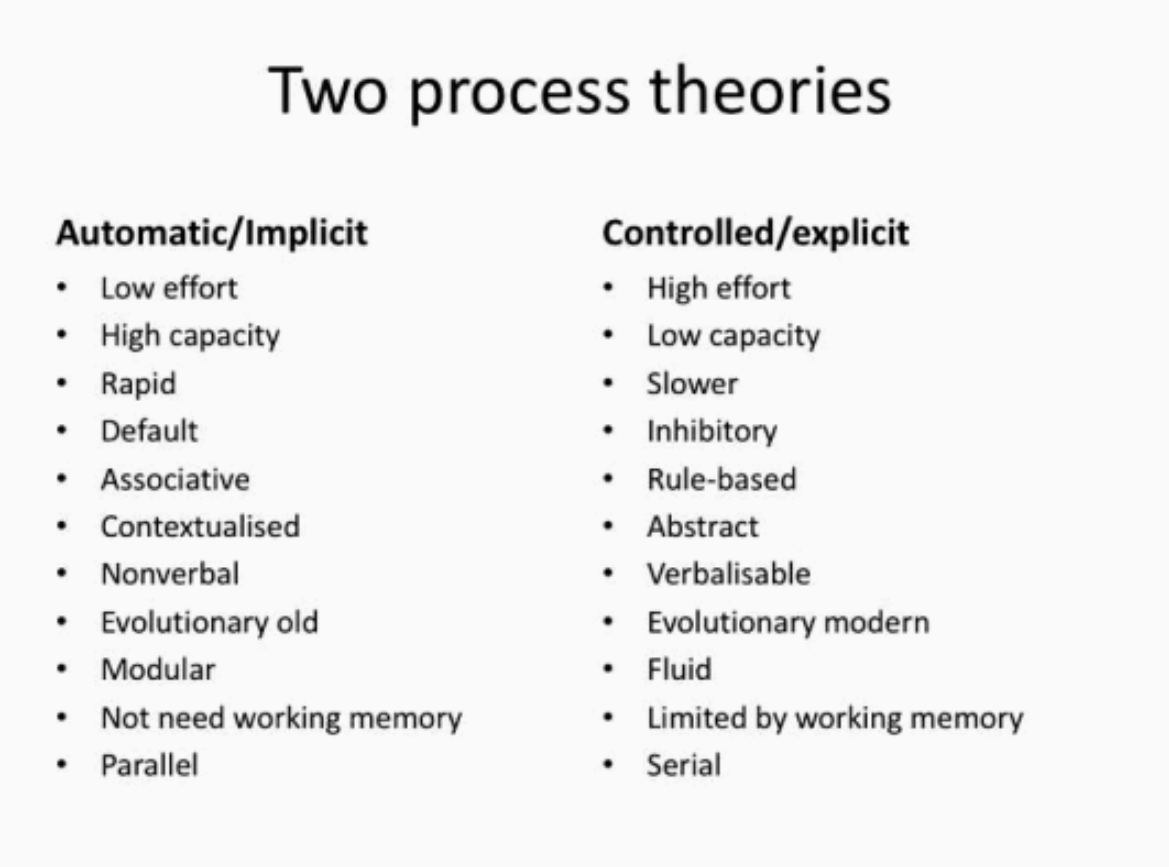
- R-O or R-S* learning = instrumental learning
    - Response-outcome or response-stimulus

Associations

- Experiential marketing (brand associated with emotion/experience)

Implicit vs explicit causes of behaviour

- People are not good at verbalising reasons for their behaviour, so learning is measured indirectly
    - Changes in reflexes and behaviour, shifts in attitudes



Relationship between explicit and internal system

- Libet et al (1983)
    - Trained people to determine the time at which they made a decision
    - Recorded when people pressed a flashing light to track muscle movement and neural signal and brain signals (to determine exactly when they made a decision to press a button)
    - Told people to just randomly press the button and then report the time on the clock when they pressed it
    - Trained people to press it down to the millisecond
    - Then gave them a signal to press it as fast as they could after they saw a signal to track their reaction time in decision making
        - Bit of a lag between when people decided to act and when they actually pressed the button (with voluntary decisions)

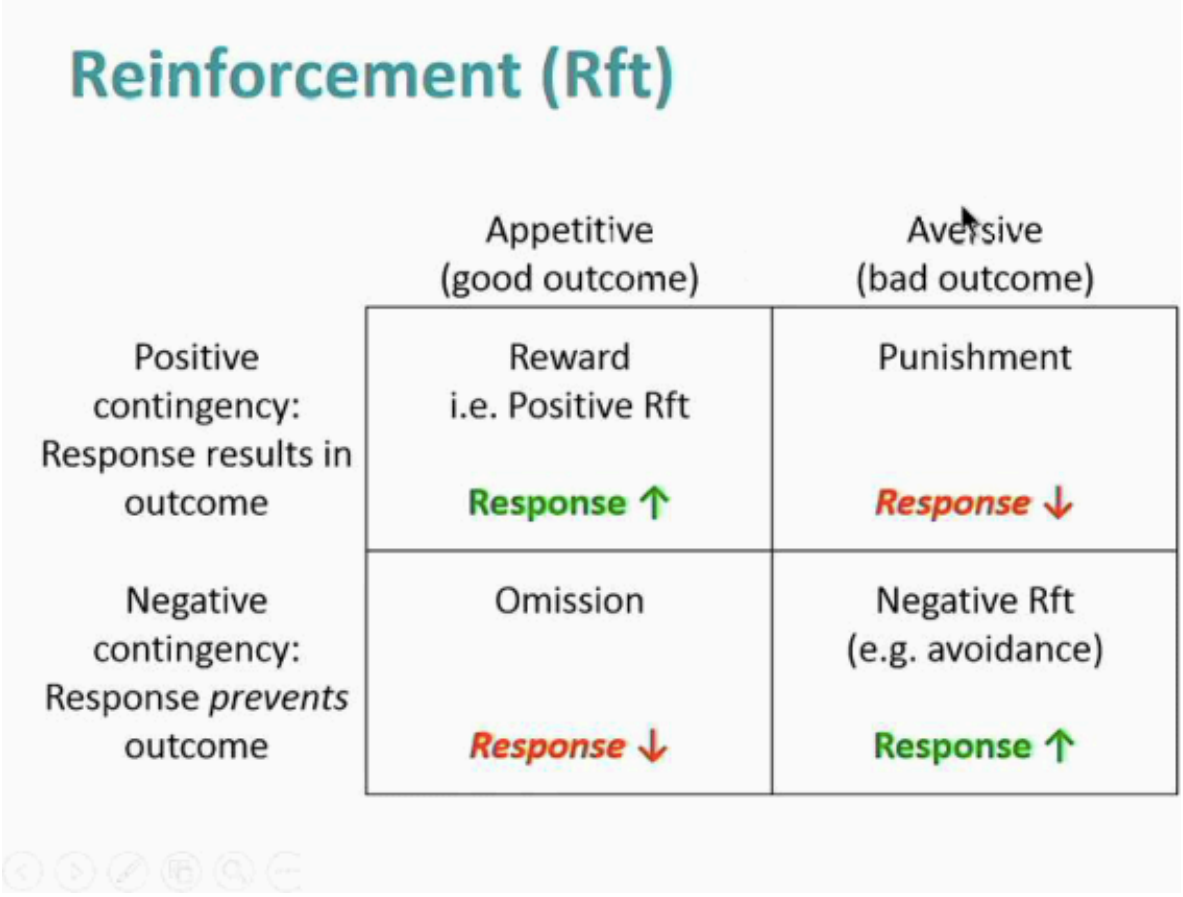
        - Between the RP onset and the actual judgement there's a lag in the brain that nobody knows whats going on
            - Is this a border between conscious decision and movement??

LECTURE TWO - POSITIVE REINFORCEMENT

Instrumental conditioning

- Operant conditioning
- 'Response' learning
- Distinct from classical (Pavlovian) conditioning
    - Pavlovian = CS —> US
    - Instrumental: stimulus —> response —> outcome
- Thorndike's law of effect:
    - If the response is met by a satirising outcome, response is more likely and vice-versa

Reinforcement



Secondary reinforcement

- Response (R) —> reinforcement (Rft)
    - in between these two things is an action e.g. lever retracting, sound of food dispensing etc. —> this signals to the rat to go and get the reward
- Previously neutral stimuli may acquire reinforcing properties
    - Secondary reinforcers (e.g. in animal training they learn the command and get the food)