Cognitive Psychology

Behaviourism (1914)

- Argument is that we want to establish psyc as a science, but cannot do this through introspection because in doing so, we exclude animals, non-verbal individuals
- Therefore, behaviourism focuses on observing animals
- Rejected internal mental structures, describing all behaviours as complex Stimulus-response (S-R) associations
- We cannot measure consciousness
- Introspection = self-report, reflection based on assumption that individual is aware of what is going on, which is not very reliable
- Problem with behaviourism: individuals only learn if there is a reward, behaviour is all about incentives → presents the idea that you cannot learn without presence of reward

Tolman (1948)

- Rats have to run through maze to get food
- Found that when they get rewarded, response was faster
- Behaviourist would have predicted that learning curve begins when reward is offered
- Cognitive psychologist argues that subjects are learning from the experience in the maze and learn the layout

Language with S-R Relationships (Skinner in "Verbal Behaviour (1957))

- Language: difficult to explain using stimulus-response mechanism
- Said that responses are influenced by stimulus from physical object

The Role of Technology

- Cause of plane had nothing to do with the instrumentation but the cognitive overload – susceptible to mistakes, and missing something significant
- WWII – increased sophistication in technology e.g. planes
- Discovering human limitations in mental processing
- The need for training and practice, and better design
- Humans are far superior at information-processing than even the best computers
- Computers take in and manipulate information
    - Can use computers as a "model" for human information-processing systems
    - Can investigate mental processes scientifically
    - Can construct a model of cognitive processes and test model by measuring human behaviour

Cognitive Models

Metaphor: Behaviourism and neuroscience is the hardware (limited, neurons, brain structures, etc.) and