

LEARNING and CONDITIONING

What is learning?

Learning vs. performance

= relatively permanent change in behaviour due to past experience

= hypothetical construct

Behaviourist approaches

Classical conditioning

[Pavlov]

Higher order conditioning

- Stage 1 (before learning) UCS → UCR
- Stage 2 (during learning) CS + UCS → UCR
- Stage 3 (after learning) CS → CR

- Delayed/forward
- Backward
- Simultaneous
- Trace

- CS 2 → CR
 - CS 3 → CR
 - CS 4 → CR
- Generalisation

- CS 5 → CR
 - CS 6 → CR
 - CS 7 → CR
- Discrimination

Experimental neurosis

Phobias

Little Albert [Watson & Rayner, 1920]

Little Peter [Jones, 1924]

systematic desensitization [Wolpe, 1958]

Operant conditioning

[Skinner]

Thorndike's law of effect [1898]

trial-&-error

Analysis of Behaviour (ABC of operant conditioning)

- Antecedents
- Behaviours (operants)
- Consequences

Primary and secondary reinforcers

Stimulus control

Positive reinforcement

Negative reinforcement

Punishment

Escape and avoidance learning

Strengthening of behaviour

Weakening of behaviour

Schedules of reinforcement

- Continuous (CRF)
 - Fixed interval (FI)
 - Variable interval (VI)
 - Fixed ratio (FR)
 - Variable ratio (VR)
- Partial/intermittent

Shaping (reinforcement of successive approximations)

Behaviour modification

Pattern/rate of responding

Resistance to extinction

Does conditioning work in the same way for all species?

Conditionability = universal

Biological preparedness [Seligman, 1970]

Law of contiguity

Garcia & Koelling [1966]
Garcia et al. [1966]

Cognitive approaches

Gagné's [1970] hierarchy of learning

[Harlow, 1949] Learning sets

Insight learning

Gestalt psychology

perceptual restructuring

Transfer of learning

Tolman's cognitive behaviourism

latent learning [Tolman & Honzik, 1930]

place (or sign) learning theory [Tolman, 1948]

cognitive maps

Role of cognition in conditioning

Expectations [Rescorla, 1968]

Blocking [Kamin, 1969]

Learned helplessness [Seligman, 1975]

Social learning theory (SLT) [Bandura, 1971]

Social cognitive theory [Bandura, 1986]