

Conditioning & Learning

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- Note: Main reference and resource of this topic is taken from Feist, G. J. 2012. Psychology: Perspectives & Connections. 2nd edition. McGraw-Hill.



Learning

- Enduring changes in behavior that occur with experience
- Includes many different forms of learning
- Learning and memory work together – without one, the other cannot function



Association

- Occurs when one piece of information from the environment is linked repeatedly with another, and the organism begins to connect the two sources of information
- Associations are the key to the two major conditioning models of learning



Classical Conditioning

- Learning occurs when a neutral stimulus becomes associated with a stimulus to which the learner has an automatic, inborn response
- Ivan Pavlov and his famous dogs
 - Involuntary behavior
 - Associations formed between the presentation of meat powder and the preparation of the saliva-collection apparatus



Source: Feist, G.J (2012) Psychology: Perspectives & Connections. 2nd edition. McGraw –Hill.

Unconditioned response (UCR)	Unconditioned stimulus (UCS)	Conditioned stimulus (CS)	Conditioned response (CR)
Automatic, innate reaction to a stimuli	A stimuli that elicit a spontaneous response	A neutral input in the beginning but after several pairing, it elicit the same response UCS	A response to CS
Salivation	Food	Ringing bell	Salivation



Classical Conditioning

Two criteria for conditioning to occur:

- UCS must be paired with CS several times so that the association between the two is formed.
- Both UCS and CS must be paired in a short time span for the association to be successfully formed.



The Conditioning of Little Albert

- John B. Watson
- Little Albert – is conditioned to be fear of fluffy, white animals, mask, etc.



Source: Feist, G.J (2012) Psychology: Perspectives & Connections. 2nd edition. McGraw –Hill.

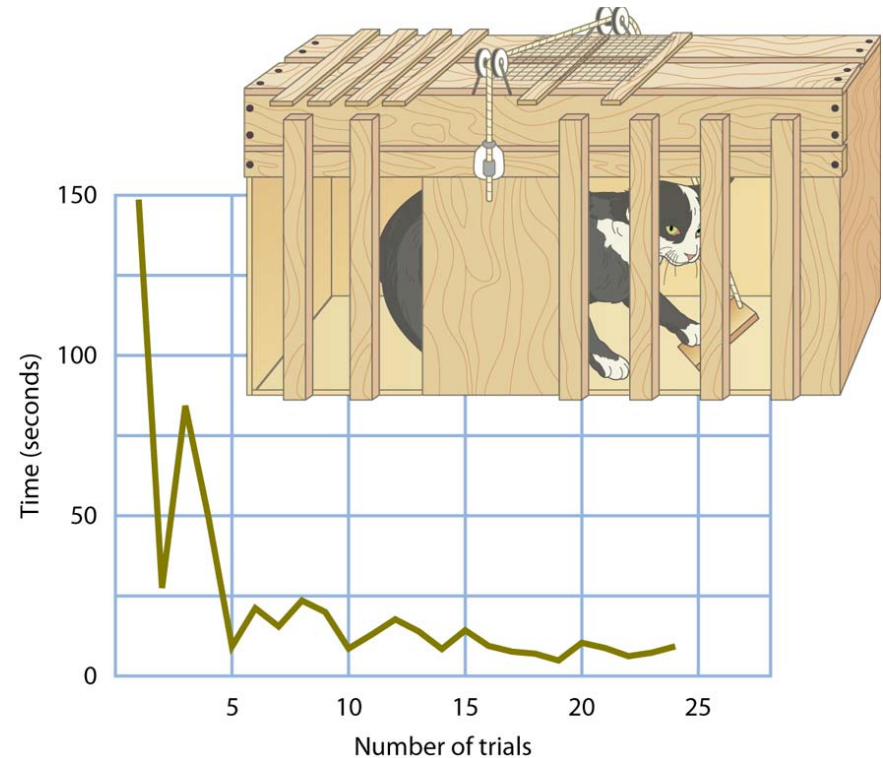
The Conditioning of Little Albert

- Little Albert generalized his fear to other things like white beards
 - Generalization
- Little Albert did not undergo deconditioning
- Raised ethical issues that are still used as the basis for certain considerations of research ethics



Operant Conditioning

- Edward L. Thorndike (1905)
- Law of effect
 - Consequences of a behavior increase or decrease



Source: Feldman R (2013)
Understanding Psychology. McGraw – Hill.

Operant Conditioning

- B.F. Skinner (1938)
 - Process of changing behavior by manipulating the consequences of that behavior
 - Voluntary behavior



Operant Conditioning

- Reinforcer
 - Any internal or external event that increases the frequency of a behavior
 - Primary reinforcers
 - Not learned
 - Innate and satisfy biological needs
 - Food, water, or sex
 - Secondary (or conditioned) reinforcers
 - Learned by association (classical conditioning)
 - Money, grades, or approval



Operant Conditioning

- Reinforcement – Increases frequency of an act
 - Positive reinforcement (adding a reward)
 - Negative reinforcement (removing an unpleasant stimulus)
- Punishment – Decreases frequency of an act
 - Positive punishment (adding an unpleasant stimulus)
 - Negative punishment (removing a desirable stimulus)

Schedules of Reinforcement

- Continuous reinforcement
 - Rewarding a behavior every time it occurs
- Intermittent reinforcement
 - Reinforcement of a behavior – but not after every response
 - Produces a stronger behavioral response



Schedules of Reinforcement

- Fixed ratio (FR)
 - Pattern of intermittent reinforcement in which reinforcement follows a set number of responses
- Variable ratio (VR)
 - Pattern of intermittent reinforcement in which the number of responses needed for reinforcement changes



Schedules of Reinforcement

- Fixed interval (FI)
 - Pattern of intermittent reinforcement in which responses are always reinforced after a set period of time has passed
- Variable interval (VI)
 - Pattern of intermittent reinforcement in which responses are reinforced after time periods of different duration have passed

Social Learning Theory



Observational Learning

- Observational learning
 - Learning by watching the behavior of others
- Enactive learning
 - Learning by doing



Social Learning Theory

- Albert Bandura (1986)
- Learning that occurs by imitating the behavior of others
 - Modeling/Imitation of behaviors of others
 - Bobo doll study (1960s)
 - The effects of video games on children and teens



Source: Feldman R (2013) Understanding Psychology. McGraw-Hill.

Imprinting

- Rapid and innate learning of the characteristics of a caregiver very soon after birth
 - Ethology
 - Sensitivity period



Imitation, Mirror Neurons, and Learning

- For some neurons in the frontal lobe of the cerebral cortex, the experience of watching someone else do something is like doing it yourself
 - Children with autism may have deficits in mirror neuron systems



Source: Feldman R (2013)
Understanding Psychology. McGraw – Hill.