

LEARNING = Relatively permanent change in behavior due to experience.

John B. Watson

Psychology as objective science. Recommended study of behavior without reference to unobservable mental processes.
(Dozen healthy infants...)

Response: Any identifiable behavior (Internal: Faster heartbeat, Observable: Eating, scratching)

Antecedents: Events that precede a response

Consequences: Effects that follow a response

CLASSICAL CONDITIONING = Antecedent events become associated with one another.

Ivan Pavlov: Russian physiologist who initially was studying digestion. Used dogs to study salivation when dogs were presented with meat powder. (aka: Respondent Conditioning)

Terms of Classical Conditioning

Neutral Stimulus (NS)	Originally does not elicit a response
Unconditioned Stimulus (UCS)	Stimulus that automatically elicits a response
Unconditioned Response (UR)	Response that occurs following UCS without learning
Conditioned Stimulus (CS)	Stimulus that elicits a response because of repeated pairings (learning)
Conditioned Response (CR)	Response that occurs following CS <i>because</i> of learning

Process of Classical Conditioning

NS, UCS => UCR

CS+UCS => UCR

CS => CR

Higher Order Conditioning = Adding an additional CS to the already conditioned CS. (ie: CS2 + CS => CR)

Stimulus Generalization = Inability to detect differences in similar stimuli

Stimulus Discrimination = Ability detect differences in similar stimuli

John Garcia and Robert Koelling = Some things are better pairs in conditioning (Like A and D)

A = taste and poison, B = light/noise and poison, C = taste and shock, D = light/noise and shock

Conditioned Emotional Response = CR is an emotion (Fear, happiness, sadness...) CS -> CER

Garcia Effect = CER with food and nausea

Experimental Neurosis = mental neurosis caused by too similar stimuli

Addiction treatment / Counterconditioning = see therapy (ch 17) notes

Stages

Acquisition - learning

Extinction - forgetting

Savings - faster next time

Spontaneous Recovery - creeps up later

Rate

Negative Acceleration - learning slows as the amount of learning increases

Asymptote - learning levels off (most stable point)

Timing and Conditioning

Standard = CS + UCS

Delay = long delay in onset of CS + UCS

Temporal = CS (set amount of time) + UCS

Simultaneous = CS/UCS at same time (no conditioning)

Backward = UCS + CS (no conditioning)

Temporal contiguity = events are linked due to closeness in time

Contingency (Robert Rescorla) = events are linked because one becomes contingent on the other

Expectancy

Little Albert

Law of Effect: Edward Lee Thorndike. Behaviors followed by favorable consequences become more likely, and behaviors followed by unfavorable consequences become less likely

OPERANT CONDITIONING = type of learning in which behavior is strengthened if followed by reinforcement or diminished if followed by punishment

Operant Behavior = operates (acts) on environment produces consequences

Respondent Behavior = occurs as an automatic response to stimulus behavior learned through classical conditioning

B.F. Skinner (1904-1990) = elaborated Thorndike's Law of Effect; developed behavioral technology



Operant Chamber (Skinner Box) = chamber with a bar or key that an animal manipulates to obtain a food or water reinforcer; contains devices to record responses

Reinforcer = any event that strengthens the behavior it follows

Punishment = aversive event that decreases the behavior that it follows powerful controller of unwanted behavior,

	REINFORCEMENT (increasing bx)	PUNISHMENT (decreasing bx)
POSITIVE (adding)	Adding something pleasant to increase bx +R	Adding something unpleasant to decrease bx +P
NEGATIVE (subtracting)	Subtracting something unpleasant to increase bx - R	Subtracting something pleasant to decrease bx - P

Primary Reinforcer = innately reinforcing stimulus (i.e., satisfies a biological need)

Conditioned Reinforcer = stimulus that gains its reinforcing power through its association with primary reinforcer (Aka: secondary reinforcer)

Shaping = reinforce for successive approximations of bx (for bxs that would not normally happen on their own)

Continuous Reinforcement = reinforcing the desired response each time it occurs

Partial (Intermittent) Reinforcement = reinforcing a response only part of the time results in slower acquisition; greater resistance to extinction

Fixed Ratio (FR) = reinforces after a specified number of responses; fast learning/fast extinction; very high rate of responding; piecework

Variable Ratio (VR) = reinforces after an average /unpredictable number of responses; gambling/ fishing; very hard to extinguish

Fixed Interval (FI) = reinforces after a specified time has elapsed ; Paychecks every Friday

Variable Interval (VI) = reinforces at average/unpredictable time intervals ; produces slow steady responding; like pop quiz; most resistant to extinction

Generalization = Respond to similar stimuli

Discrimination = Respond only to the reinforced stimuli

Discrimination training = S+ reinforce, S- do nothing

Response chain = Many responses linked leading to a single reward. Anticipate future rewards; grades

Escape learning (learned helplessness)

Avoidance learning

Cognitive Learning = Higher level thinking in learning

Cognitive Maps = internal representation of an area/campus/ room/maze...

Latent Learning = Tolman and Honzik (1930) Learning wasn't apparent until the reinforced

OBSERVATIONAL LEARNING / SOCIAL LEARNING/ MODELING / VICARIOUS LEARNING = learning by watching and imitating others.

Bandura's Bobo Doll Experiment

A: watched adults abuse Bobo

B: watched TV footage of the adults abusing Bobo

C: watched cartoons of adults abusing Bobo

Were then frustrated while in a room with Bobo

Learned Helplessness (Seligman)

Mirror Neurons