

Learning Objectives on Textbook, Learning & Behavior by James Mazur, 6th Edition

PSY 458 Learning
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Chapter 1 The Psychology of Learning and Behavior

1. Define the construct of learning from a psychological perspective.
2. Discuss the contribution of B.F. Skinner to the field of Psychology.
3. Identify the major characteristic of a scientific theory.
4. List and discuss the 4 ways of judging the scientific merit of a theory.
5. Identify and describe observational techniques.
6. Describe the differences between observational techniques and the experimental method.
7. Describe behaviorism and the behavioral approach.
8. Discuss the advantages and disadvantages of using animals in experimental research.
9. Discuss the contribution of John B. Watson to the field of Psychology.
10. Contrast and compare Neal Miller's perspective of Behaviorism with that of B.F. Skinner and describe the role of intervening variables in psychology within the two perspectives.
11. Discuss the differences between determinism and Chaos Theory.

Know the definition of the following of terms/concepts/names:

Learning	Double-blind procedure,
Performance	Significance tests
Acquisition phase	Inferential statistics
General principles	Statistically significant
Scientific theory	Behaviorism
Independent variable	Cognitive psychology
Dependent variable	Introspection
Intervening variable	Determinism
Syntax	Free will
Testability (falsifiability)	Chaos theory
Simplicity	Extreme sensitivity to initial conditions
Generality	Butterfly effect
Fruitfulness	
Agreement with the theory	
Anecdote	
Case history method	
Biased sample	
Sampling error	
Confounding variable	
Placebo effect	
Experimental and control group	

Chapter 2 Simple Ideas, Simple Associations, and Simple Cells

1. Contrast and compare the British Associationists view of memory with that of Aristotle, the first Associationist.
2. Describe Aristotle's principles of association and be able to identify/recall examples of each.
3. Describe the modification that Thomas Brown made to Aristotle's principles.
4. Explain the proposition that complex ideas form as a result of the pairing of simple sensations.
5. List the major findings from Ebbinghaus (1885) experiments regarding the principles of association.
6. Describe the parallels between the British Associationists and Ebbinghaus and that of modern approaches to learning, cognitive psychology and behaviorism.
7. Name the components of a neuron and how they function with regard to simple sensations.
8. Discuss the major findings from Hubel and Wiesel (1965, 1979) groundbreaking experiments regarding feature detectors within the visual cortex.
9. Explain the single neuron doctrine of perception.
10. Briefly describe the 3 ways in which experience or learning can modify the brain's nervous system.

Know the definition or description of the following of terms/concepts/names:

Aristotle	Inhibitory synapse
Associationist	Receptor
Contiguity	Feature detector
Similarity	Visual cortex
Contrast	Simple cells
British Associationists	Single neuron doctrine of perception
John Locke	Long-term potentiation
Tabula rasa	Arborization
Thomas Hobbes	Neurogenesis
Nativism	
Empiricist	
Simple sensations	
Simple ideas	
Complex ideas	
Thomas Brown	
Hermann Ebbinghaus	
Nonsense syllables	
Savings	
Overlearning	
Forgetting curve	
Neuron	
Cell body,	
Dendrites,	
Axons,	
Transmitters	
Synapse	
Excitatory synapse	

Chapter 3 Innate Behavior Patterns and Habituation

1. Describe goal-directed behaviors from the perspective of control system theory.
2. Describe the physiological aspect of reflexive behavior and be able to recognize/recall examples of each.
3. List the characteristics of a fixed action pattern and describe the role that a sign stimulus plays in this behavior.
4. Distinguish Watson's view regarding innate human abilities with that of Steven Pinker's view.
5. Discuss how language and emotion are used as supporting evidence of innate abilities in human beings.
6. Distinguish between fixed action patterns and reaction chains and be able to recognize/recall examples of each.
7. Distinguish between Brown's human universals (1991) and innate behavioral characteristics.
8. Define habituation and identify its characteristics and functions.
9. List and describe the 6 general principles of habituation.
10. Describe the opponent-process theory and apply it to the emotional response of a new or repeated stimulus.
11. Identify the ways in which habituation is studied in human beings.

Know the definition or description of the following of terms/concepts/names:

Ethologist

Control systems theory

Comparator

Reference input

Actual input

Output

Feedback system

Disturbance

Reflex

Spinal reflex arc

Fixed action pattern

Sign stimulus

Reaction chain

John B. Watson

Steven Pinker

Human universals

Habituation

Orienting response

Stimulus specific

Relearning

Overlearning

Generalization

Opponent-process theory

a-process

b-process

Tolerance

Chapter 4 Basic Principles of Classical Conditioning

1. List and define the components of classical conditioning as proposed by Pavlov.
2. Describe and cite examples of taste aversion and extinction from a Pavlovian perspective.
3. Describe Pavlov's Stimulus Substitution Theory and the problems with the theory.
4. Describe conditioned compensatory responses.
5. Describe the S-S and S-R views of what is learned in classical conditioning.
6. Describe the variety of conditioned responses.
7. Describe disinhibition and the reacquisition phase.
8. Explain the classical conditioning concepts such as generalization, discrimination, higher order conditioning, and conditioned inhibition.
9. Generate examples of classical conditioning in everyday life.
10. Describe the conditioned emotional response procedure and how classical conditioning is measured.
11. Discuss the role that timing plays in the establishment of an association between the conditioned stimulus and the unconditioned stimulus.
12. Explain the pioneering work of Ader and co-workers with regard to the classical conditioning of the immune system.
13. Discuss the application of classical conditioning with regard to behavior therapy.
14. Describe how aversive counterconditioning can be used to treat alcoholism.

Know the definition or description of the following of terms/concepts/names:

Ivan Pavlov	Disinhibition
Classical conditioning	Reacquisition phase
Conditioned reflexes	Conditioned inhibition
Unconditioned stimulus (US)	Conditioned inhibitor
Unconditioned response (UR)	Excitatory CS
Conditioned stimulus (CS)	Compound CS
Conditioned response (CR)	Generalization
Eyeblink conditioning	Generalization gradient
Conditioned emotional response (CER)	Discrimination
Conditioned suppression	Short-delay conditioning
Skin conductance response (SCR)	Simultaneous conditioning
Taste aversion learning	Trace conditioning
Stimulus substitution theory	CS-US interval
Sign-tracking theory	Long-delay conditioning
Conditioned compensatory responses	Backward conditioning
S-R association	CS-US correlation
S-S association	Second-order conditioning
US devaluation	First-order CS
Acquisition phase	Evaluative conditioning
Asymptote	Systematic desensitization
Extinction	Progressive relaxation
Spontaneous recovery	Virtual reality therapy
	Aversive counterconditioning

Chapter 5 Theories and Research on Classical Conditioning

1. Identify the *frequency principle* as it would apply to classical conditioning.
2. Explain why conditioning is not an automatic result when a CS and US are paired.
3. Describe Kamin's blocking experiment and the results.
4. Describe the Rescorla-Wagner model of classical conditioning and its six rules.
5. Describe the phenomenon of overshadowing.
6. Explain how the CS preexposure effect supports the assumption that the conditionability of a CS changes from one situation to another.
7. Explain Mackintosh's theory of attention.
8. Contrast and compare the Rescorla-Wagner model of classical conditioning with the comparator theories.
9. Describe the role that biological constraints might play with respect to general principles of learning.
10. Describe Garcia's research regarding the role of contiguity in taste aversion learning.
11. Describe Garcia's research regarding the role of biological preparedness in taste aversion learning.
12. Discuss how taste-aversion learning challenges the contiguity principle of classical conditioning.
13. Describe the compensatory CR theory of drug tolerance and Siegel's morphine research.
14. Describe cue exposure treatment as it is used in some drug treatments.
15. Describe Schull's conditioned opponent theory about compensatory CRs. What is the difference between Schull's theory and Solomon & Corbit's opponent process theory?

Know the definition or description of the following of terms/concepts/names:

Blocking effect
Leon Kamin
Rescorla-Wagner Model
Overshadowing
Overexpectation effect
CS preexposure effect
Mackintosh's theory of attention
Comparator theories
Contextual stimuli
Equipotentiality premise
Prepared associations
Contraprepared associations
Unprepared associations
Biological preparedness
Biological constraints on learning
Tolerance
Cue exposure treatment
Conditioned opponent theory
Sometimes opponent process (SOP) theory
Monophasic
Biphasic

Chapter 6 Basic Principles of Operant Conditioning

1. Explain Thorndike's Law of Effect and generate several examples of this phenomenon.
2. Describe Guthrie & Horton's experiments with a camera. What conclusions were drawn?
3. Describe Skinner's superstition experiment and how it produced reinforced behavior.
4. Explain the process of shaping and its application in the classroom and a tool in behavior modification.
5. Describe the basic principles of operant conditioning.
6. Explain Skinner's conceptualization of Three Term Contingency.
7. Contrast and compare the explanations for the reoccurrence of an eliminated behavior via classical and operant conditioning.
8. Define the term generalized reinforcer and provide examples of this phenomenon.
9. Contrast and compare the phenomenon of sequence behaviors via reaction and response chains.
10. Describe the study by Breland and Breland on instinctive drift.
11. Discuss the procedure called autoshaping and its proposed association with classical conditioning.
12. Explain the controversy surrounding instinctive drift and the principle of reinforcement.

Know the definition or description of the following of terms/concepts/names:

Puzzle box

E. L. Thorndike

Escape latency

Law of Effect

Reinforcer

Positive reinforcement

Stop-action principle

Superstitious behavior

Skinner's superstition experiment

Shaping (method of successive approximations)

Conditioned reinforcer

Primary reinforcer

Behavior modification

Discrete trial procedure

Operant response

Free operant procedure

Discriminative stimulus

Three-term contingency

Stimulus control

Resurgence

Conditioned reinforcement (secondary reinforcement)

Generalized reinforcers

Response chain

Backward chaining

Forward chaining

Instinctive drift

Autoshaping

Sign-tracking

Behavior-systems analysis

Chapter 7 Reinforcement Schedules: Experimental Analysis and Applications

1. Describe the four simple reinforcement schedules and the types of behavior they produce during reinforcement. Be able to recognize/recall examples of each.
2. Describe how responding on the four simple reinforcement schedules behave under extinction.
3. Describe the partial reinforcement extinction effect.
4. Describe the two theories of the partial reinforcement extinction effect, the discrimination hypothesis and the generalization decrement hypothesis.
5. Describe concurrent schedules and chained schedules of reinforcement.
6. To discuss the factors that affect performance on reinforcement schedules.
7. Explain the difference between contingency-shaped and rule-governed behavior.
8. What evidence exists that human behavior is often rule-governed as opposed to contingency-shaped?
9. Describe Ivar Lovaas' program of treating autism in young children. How successful is it?
10. Describe the use of token economies in hospitals for psychiatric patients. Why has the use of token economies decreased in psychiatric hospitals?
11. Describe the use of token economies in classrooms and in a student housing cooperative at the University of Kansas.
12. Discuss how organizational behavior management is devoted to using the principles of behavioral psychology to improve human performance in the workplace.
13. Describe how behavior therapy can be used for marital problems.

Know the definition or description of the following of terms/concepts/names:

Reinforcement schedule	Ivar Lovaas
Continuous reinforcement (CRF)	Token economy
Cumulative recorder	Contingency contract
Fixed-ratio (FR) schedule	Behavior exchange
Ratio strain	
Post-reinforcement pause	
Variable ratio (VR) schedule	
Fixed interval (FI) schedule	
Fixed-interval scallop	
Variable-interval (VI) schedule	
Resistance to extinction	
Partial reinforcement extinction effect	
Discrimination hypothesis	
Generalization decrement hypothesis	
Concurrent schedule	
Chained schedule	
Response effort	
Behavioral momentum	
Contingency-shaped behavior	
Rule-governed behavior	
Autism	
Prompt	
Fading	

Chapter 8 Avoidance and Punishment

1. Distinguish between the two types of punishment (positive and negative) and reinforcement (positive and negative) for modifying behavior.
2. Describe the 'avoidance paradox' with respect to the differences between escape and avoidance.
3. Describe Mowrer's Two-Factor Theory of Avoidance.
4. Describe the evidence supporting Two-Factor Theory.
5. Describe the two problems with Two-Factor Theory, avoidance without observable signs of fear and resistance to extinction of avoidance behavior.
6. Describe One-Factor Theory.
7. Describe the Sidman avoidance procedure. What problem existed with the procedure that required development of a new procedure to test One-Factor Theory?
8. Describe the Herrnstein and Heinline experiment, and results, that tested One-Factor Theory.
9. How does One-Factor Theory explain resistance to extinction of avoidance behavior?
10. Describe the Cognitive theory of avoidance and how it deals with resistance to extinction.
11. Describe response blocking or flooding as it relates to extinction of avoidance behavior.
12. Describe species-specific defense reactions as a hypothesis for avoidance behavior.
13. Become familiar with the evidence supporting Bolles' SDR hypothesis.
14. What conclusions did Mazur (textbook author) draw about the theories of avoidance?
15. What is the difference between flooding and systematic desensitization?
16. Become familiar with the use of flooding as a behavioral treatment in phobias. What conditions maximize its effectiveness?
17. Describe Seligman's learned helplessness experiment and its role in explaining depression and other illness-related behaviors.
18. Explain how learned helplessness is used to explain the performance of professional football teams.
19. Describe the 3 dimensions that Abramson, Seligman, & Teasdale (1978) proposed for learned helplessness in humans.
20. Describe Skinner's 1938 experiment in punishment and his conclusions.
21. What conclusions are reached about whether punishment is the opposite of reinforcement? Do these conclusions support Skinner and Thorndike?
22. Identify the factors that influence the effectiveness of punishment.
23. Describe the advantages and disadvantages of using punishment to modify behavior.
24. Describe techniques for behavior deceleration.
25. Describe the controversy in using punishment within a behavior therapeutic environment.

Know the definition or description of the following of terms/concepts/names:

Negative reinforcement
Escape
Avoidance
Punishment
Negative punishment
Omission
Shuttle box
Avoidance paradox

Two-Factor Theory
One-Factor Theory
Sidman avoidance procedure
Free-operant avoidance
Herrnstein & Heinline experiment
Shock-frequency reduction theory
Cognitive theory of avoidance

Response blocking
Flooding
Species-specific defense reactions (SSDRs)
Robert Bolles
Behavior decelerators
Learned helplessness
Suppression
Response cost

Time-out
ABAB design
Overcorrection
Escape extinction
Non-contingent reinforcement
Stimulus satiation

Chapter 9 Theories and Research on Operant Conditioning

1. Describe Thorndike's experimental attempt to support his claim that a response is necessary to learning to occur?
2. What conclusions are currently reached about whether a response is necessary for learning?
3. Describe the experimental findings from Tolman and Honzik's (1930) study regarding the role of a reinforcer in learning.
4. Describe the research that examines the function of reinforcers, specifically Colwill & Rescorla's 1985 experiment. What conclusions were reached?
5. Are classical conditioning and operant conditioning one single type of learning or two? What conclusions were reached?
6. Describe the landmark experiments conducted by Neal Miller and colleagues and its contribution to the field of biofeedback.
7. To discuss the application of biofeedback with regard to physical and mental health problems.
8. Describe the controversy surrounding the classification of reinforcers from a drive theory and need reduction theory perspective.
9. Explain Premack's Principle and describe the classic Premack 1963 study and its results.
10. Describe how Premack's principle is applied within the field of behavior modification.
11. Describe Response Deprivation theory.
12. Describe Mazur's 1975 experiment and its results.
13. To explain how a functional analysis of reinforcers can be used to determine the cause of unusual behaviors.
14. Describe the field of behavioral economics and optimization theory.
15. Describe the relationship between the availability of substitutes and elasticity.
16. Describe how behavioral economics can help clarify drug abuse and drug-taking behavior.

Know the definition or description of the following of terms/concepts/names:

Latent learning
Electrical stimulation of the brain (ESB)
Biofeedback
Neurofeedback
Need-reduction theory
Clark Hull
Drive-reduction theory

Trans-situationality theory
Premack's theory
Reinforcement relativity
Reciprocal contingency
Response Deprivation Theory
Functional analysis of behavior
Automatic reinforcement
Behavioral economics
microeconomics
Optimization theory
Elastic demand
Inelastic demand

Chapter 12 Learning by Observation

1. Describe social learning theory and describe how it differs from other forms of learning.
2. Describe the Instinct Theory of Imitation.
3. Describe the differences between social facilitation, stimulus enhancement, and true imitation. Be able to recognize/recall examples of each.
4. Describe the Operant Theory of Imitation.
5. Describe the Generalized Operant Response Theory of Imitation. What is the difference between this theory and the Operant Theory of Imitation?
6. Describe Albert Bandura's Theory of Imitation.
7. Describe Bandura's famous BoBo experiments and its implication for TV violence.
8. What conclusions does the textbook author make with respect to the theories of imitation?
9. Describe the factors that affect the likelihood of imitation.
10. Describe how observation learning can affect a child's achievement motivation. Be familiar with the research in this area.
11. Describe how observational learning can influence a child's level of aggression.
12. Discuss the different research methods used to examine aggressive behaviors and media violence.
13. Describe the results of studies examining the role of media violence on aggression.
14. Describe the research that has examined the joint role that operant conditioning and observational learning has played in the development of phobias, drug use and addictions, moral standards and behavior.
15. Contrast and compare the different therapeutic techniques used to alter behavior from a modeling perspective.
16. What does Mazur (your textbook author) mean when he says "one model is worth a thousand successive approximations"?

Know the definition or description of the following of terms/concepts/names:

Social learning theory
Instinct Theory of Imitation
Social facilitation
Stimulus enhancement
True imitation
Operant Theory of Imitation
Generalized Operant Response Theory
Bandura's Theory of Imitation
Achievement motivation
Longitudinal research
Field experiments
Graduated modeling
Assertiveness training
Participant modeling
Videotape self-modeling