

Behaviorism Factsheet

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Basic Assumptions

- individuals develop patterns of action in response to environmental stimuli
- actions are functions of prior reinforcements of behavior along with measurable factors in the environment
- mental processes are not needed to explain changes in behavior
- the more frequent and enduring a response is to given stimuli, the deeper the level of learning
- the ability to form associations can be limited by physiology

Mechanisms for Learning

Basic Mechanism of Learning: Associations develop through repeated responses to environmental stimuli

Classical Conditioning

Phase 1: Unconditioned Stimulus \Rightarrow Unconditioned Response

Phase 2: Conditioned Stimulus \rightarrow Unconditioned Stimulus \Rightarrow Unconditioned Response

Phase 3: Conditioned Stimulus \Rightarrow Conditioned Response

Contiguous Conditioning

- 1) If Stimuli and Response occur together, the stimulus will tend to elicit the response
- 2) Associations reach their full strength on the first pairing of stimulus and response
 - Movements combine to form acts which can become habits if they are elicited by many cues
 - Methods for breaking habits include threshold, fatigue, and incompatible response

Operant Conditioning

- Conditioning occurs through three-term-contingencies:
Discrim. Stimulus \Rightarrow Response \Rightarrow Reinforcing Stimulus (aka Antecedent \Rightarrow Behavior \Rightarrow Consequence)
- Positive reinforcement (or punishment) is added to increase (or decrease) the frequency of a response
- Negative reinforcement (or punishment) is removed to increase (or decrease) the frequency of a response
- Basic processes include: reinforcement, extinction, primary and secondary reinforcers, the Premack principle, punishment, schedules of reinforcement, generalization, and discrimination

Experiences Forming the Basis for Learning

Associations are made between sensory experiences and physical reactions through primary reinforcers. Deep connections made using primary reinforcers become secondary reinforcers, which help to establish broader connections.


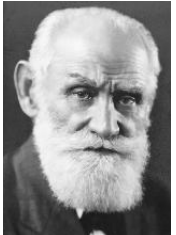


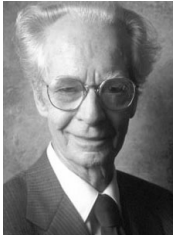
Results of the Theory

- behaviors are shaped through incremental changes via successive approximations (shaping)
- emotional associations can be made through classical conditioning (the Little Albert Experiment)
- punishment suppresses a response but doesn't eliminate it
- variable ratio-based scheduling of responses best increases the frequency of desired behavior
- behavioral change can be affected via reinforcement of desired behaviors and extinction of undesired behaviors

Teaching Implications

- Chaining and shaping principles can be used to sequence instruction
- Bonds are strengthened through practice, appropriate reinforcement, and immediate feedback
- Planning of instruction should focus on building facilitating transfer through emphasizing common cues
- Programmed instruction (linear and branching), computer-based instruction, Keller plans (modules), and contingency contracts all utilize principles of behaviorism

Major Contributors

Edward Thorndike (1874-1949) Connectionism 	Ivan Pavlov (1849-1936) Classical conditioning 	John B. Watson (1878-1958) Modern behaviorism 	Edwin R. Guthrie (1886-1959) Contiguous conditioning 	B. F. Skinner (1904-1990) Operant conditioning 
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Reference: Schunk, D. H. (2004). Behavioral theories. In *Learning theories: an educational perspective* (pp. 29-81). Upper Saddle River, NJ: Pearson Education Inc.