

THREE STAGES OF BEHAVIORISM

Three Stages of Behaviorism

- Watson's behaviorism: peak of popularity in 1924
- Neobehaviorism (1930 to 1960): includes the work of Tolman, Hull, and Skinner
 - The core of psychology is the study of learning
 - Most behavior, no matter how complex, can be accounted for by the laws of conditioning
 - Psychology must adopt the principle of operationism

Three Stages of Behaviorism (cont'd.)

- Neo-neobehaviorism or sociobehaviorism (1960 to 1990): includes Bandura and Rotter
 - A return to the consideration of cognitive processes while maintaining a focus on the observation of overt behavior

OPERATIONISM

Operationism

- Operationism: the doctrine that a physical concept can be defined in precise terms related to the set of operations or procedures by which it is determined
 - A physical concept is the same as the set of operations or procedures by which it is determined
 - Insistence on discarding pseudo-problems (propositions that cannot be put to experimental test)

Operationism (cont'd.)

- The concept of individual or private conscious experience is also a pseudo-problem for the science of psychology
- Trend toward greater objectivity in the methodology and subject matter of psychology
- Psychologists used operationism more extensively than did physicists

EDWARD CHACE TOLMAN
(1886 - 1959)

Edward Chace Tolman (1886-1959)

- Trained in the tradition of Titchener's structural psychology
- Questioned the scientific usefulness of introspection
- Taught comparative psychology and conducted research on learning in rats
- Became dissatisfied with Watson's form of behaviorism and began to develop his own

Edward Chace Tolman

(1886-1959) (cont'd.)

- Purposive behaviorism: Tolman's system combining the objective study of behavior with the consideration of purposiveness or goal orientation in behavior
 - Denied the mentalistic concepts in psychology
 - Purposiveness can be defined in objective behavioral terms without introspection
 - Behavior “reeks” of purpose and is oriented toward achieving a goal or learning the means to an end

Intervening Variables

- Intervening variables: unobserved and inferred factors within the organism that are the actual determinants of behavior
 - Five causes of behavior: environmental stimuli, physiological drives, heredity, previous training, and age
- Learning theory: the repeated performance of a task strengthens the learned relationship between environmental cues and the organism's expectation (cognitive approach)

CLARK LEONARD HULL
(1884 - 1952)

Clark Leonard Hull (1884-1952)

- Devoted to problems of the scientific method
- His form of behaviorism was more sophisticated and complex than Watson's
- The spirit of mechanism:
 - Describes human nature in mechanistic terms
 - Regarded human behavior as automatic and capable of being reduced to the language of physics

Clark Leonard Hull

(1884-1952) (cont'd.)

- Objective methodology and quantification
 - Three methods that Hull considered useful:
 - Simple observation, systematic controlled observation, and the experimental testing of hypotheses
 - Fourth method:
 - Hypothetico-deductive method: Hull's method for establishing postulates from which experimentally testable conclusion can be deduced
- Drives:
 - Basis of motivation; bodily need that arose from a deviation from optimal biological conditions

Clark Leonard Hull

(1884-1952) (cont'd.)

- Learning: theory focuses on the principle of reinforcement
 - Law of primary reinforcement: when a stimulus-response relationship is followed by a reduction in a bodily need, the probability increases on subsequent occasions the same stimulus will evoke the same response
 - Habit strength: the strength of the stimulus-response connection, which is a function of the number of reinforcements

**B. F. SKINNER (1904-
1990)**

B. F. Skinner (1904-1990)

- The world's most influential psychologist for decades
- Skinner's contributions:
 - Developed a program for the behavioral control of society
 - Promoted behavior modification techniques
 - Invented an automated crib for tending infants

Skinner's Behaviorism

- Had a cleaner approach to behaviorism:
 - Hull emphasized the importance of theory; Skinner advocated an empirical system with no theoretical framework within which to conduct research
 - Devoted to the study of responses
 - The “empty organism” approach: not concerned with speculating about what might be occurring inside the organism

Operant Conditioning

- A learning situation that involved behavior emitted by an organism rather than elicited by a detectable stimulus
 - Organism's response appears to be spontaneous
 - Skinner believed operant behavior better represents the typical learning situation
 - Example: the rat in the Skinner box presses the bar, it receives food
 - Law of acquisition: the strength of an operant behavior is increased when it is followed by the presentation of a reinforcing stimulus

Schedules of Reinforcement

- In the real world, reinforcement is not always so consistent or continuous as in the lab
 - Reinforcement schedules: conditions involving various rates and times of reinforcement
 - Frequency of reinforcement leads to rate of learning, and to rate of extinction of behaviors
 - Fixed ratio
 - Fixed interval
 - Variable ratio
 - Variable interval

B. F. Skinner (1904-1990) (cont'd.)

- Successive approximation: an explanation for the acquisition of complex behavior
 - Behaviors such as learning to speak will be reinforced only as they come to approximate or approach the final desired behavior
- Body of work includes aircribs, teaching machines, and pigeon-guided missiles
- Proposed a utopian society: *Walden Two*

B. F. Skinner (1904-1990) (cont'd.)

- Behavior modification: the use of positive reinforcement to control /modify the behavior of individuals or groups
 - A frequently used clinical application in mental hospitals, factories, prisons, and schools to change undesirable behaviors to more acceptable ones

B. F. Skinner (1904-1990) (cont'd.)

- Criticisms of Skinner's behaviorism:
 - Extreme positivism & opposition to theory
 - Reinforcement was not as all-powerful as Skinner claimed
- Contributions of Skinner's behaviorism:
 - Assertions about economic, social, political, and religious issues that he derived from his system
 - Overall goal: the betterment of human lives and society through the application of the principles of his form of behaviorism

SOCIOBEHAVIORISM: THE COGNITIVE CHALLENGE

Sociobehaviorism: The Cognitive Challenge

- Sociobehaviorism: the third stage of behaviorism
- Leaders include Bandura and Rotter
- Different from the behaviorism of Skinner
- Return to study of mental or cognitive processes: reflection of the broader cognitive movement in psychology as a whole

ALBERT BANDURA

(1925 -)

Social Cognitive Theory

- Less extreme than Skinner's theory
- Stressed the influence on external reinforcement schedules of such thought processes as beliefs, expectations, and instructions
- Emphasized the importance of rewards or reinforcements in acquiring and modifying behavior

Social Cognitive Theory (cont'd.)

- Modeling: individuals can learn virtually all kinds of behavior without experiencing reinforcement directly
 - Vicarious reinforcement: learning can occur by observing the behavior of other people, and the consequences of their behavior, rather than by always experiencing reinforcement personally
 - We are much more likely to model our behavior after a person of the same sex and age, our peers, who have solved problems similar to our own

Self-Efficacy

- One's sense of self-esteem and competence in dealing with life's problems
- People who have a great deal of self-efficacy believe they are capable of coping with the diverse events in their lives
 - Higher self-efficacy = better grades, more career possibilities, greater job success, higher personal goals, and better physical and mental health than people lower in self-efficacy

JULIAN ROTTER (1916-)

Julian Rotter (1916-)

- The first psychologist to use the term “social learning theory”
- Argued that we learn primarily through social experiences
- Cognitive processes: we perceive ourselves as conscious beings capable of influencing the experiences that affect our lives
 - Internal cognitive states determine the effects that different external experiences

Julian Rotter (1916-)

- Locus of control: Rotter's idea about the perceived source of reinforcement
 - Internal locus of control is the belief that reinforcement depends on one's own behavior
 - External locus of control is the belief that reinforcement depends on outside forces
- Research has shown that people with an internal locus of control tend to be physically and mentally healthier than those with an external locus of control

THE FATE OF BEHAVIORISM

The Fate of Behaviorism

- Methodological behaviorists: invoke internal cognitive processes as part of psychology's subject matter
 - Hull, Tolman, Bandura, and Rotter
- Radical behaviorists: believe that psychology must study only overt behaviors and environmental stimuli (not internal states)
 - Watson and Skinner
- Behaviorism remains vital in contemporary psychology