CHAPTER 15

SKINNER'S OPERANT ANALYSIS

Introduction

- **Operant analysis:** study of the ways in which behavior is acquired, maintained, or modified by its reinforcing or punishing consequences

Scientific Behaviorism and Determinism

- Why have we not made more progress in understanding human behavior?
  - Skinner believed our refusal to give up mentalistic explanations of behavior, which appear to help us understand our actions, hinder us in our quest
  - **Mentalism:** indicates learning theorists' dissatisfaction with the use of concepts that cannot be objectively assessed or validated as explanatory devices in attempts to account for behavior
    - These concepts are supposed to have explanatory power, but in reality do not
- Skinner believed in a substantial level of determinism rather than pure free will

Personality from the Perspective of a Radical Behaviorist

- Skinner believed that the study of personality involves a systematic examination of the idiosyncratic learning history and unique genetic background of the individual
  - Involves the discovery of the unique set of relationships between the behavior of an organism and its reinforcing or punishing consequences

Operant Conditioning

- Establishment of the linkage or association between a behavior and its consequences

  – Through operant conditioning, the occurrence of behavior is made more or less probable

Operant Conditioning (cont'd.)

- **Contingency:** relationship between a behavior and its consequences
  - Three-term contingency:
    - The events that precede the behavior
    - The behavior itself
    - The consequences that follow the behavior
- **Discrimination:** responding differently in the presence of different situational events
- **Stimulus control:** process in which a person's response is determined by a particular stimuli
- **Prompts:** antecedent stimuli that help initiate behaviors
- **Discriminative stimulus:** presence signals an individual to respond because he or she has learned previously that its presence leads to reinforcing consequences

Operant Conditioning (cont'd.)

- Components of operant conditioning (cont'd.)
  - **Stimulus generalization:** responses made in the presence of a particular stimulus come to be made in the presence of other, similar stimuli
  - **Positive reinforcement:** presentation of a positive reinforcer following a response, with the result that the rate of that response increases
  - **Negative reinforcement:** removal of an aversive stimulus following a response, with the result that the rate of that response increases
  - **Positive punishment:** presentation of an aversive stimulus following a response, with the result that the rate of that response decreases
  - **Negative punishment:** removal of a positive reinforcer following a response, with the result that the rate of that response decreases

Operant Conditioning (cont'd.)

- Components of operant conditioning (cont'd.)
  - **Extinction:** reduction in behavior that occurs as a result of the failure to reinforce previously reinforced behavior
  - **Shaping:** teaching a new behavior by reinforcing responses that successively approximate it

Operant Conditioning (cont'd.)

- Schedules of reinforcement :
    - **Continuous reinforcement:** schedule of reinforcement in which each response is followed by a reinforcer
    - **Intermittent reinforcement:** schedule of reinforcement in which responses produce reinforcers only occasionally
        - **Fixed-ratio:** fixed number of responses is required before a reinforcer is applied
        - **Fixed-interval:** the first response that occurs after a fixed amount of time has elapsed is reinforced

Operant Conditioning (cont'd.)

- **Self-control processes:** actions instigated by a person to alter the conditions that influence his or her behavior
    - Physical restraints
    - Physical aids
    - Changing the stimulus conditions
    - Manipulating emotional conditions
    - Performing alternative responses
    - Positive self-reinforcement
    - Self-punishment

Summary of Operant Conditioning Principles

	Positive Stimulus	**Negative Stimulus**
Presentation	positive reinforcement	positive punishment
Removal	negative punishment	negative reinforcement

Personality Development

- Skinner preferred a theory where people survive by learning which contingencies lead to reinforcement and which ones lead to punishment (rather than Piaget's stage theory)
    - **Repertoire:** unique set of acquired behavior patterns

Assessment Techniques

- Skinner was primarily interested in the experimental analysis of behavior
  - He sought to identify those environmental variables that control the emission of behavior, namely, situational factors and reinforcement schedules

Theory's Implications for Therapy

- **Behavior modification:** series of procedures that seek to change behavior through reliance on reinforcement principles or, less often, by reliance on punishment principles
  - **Discrimination training:** procedure in which person learns to confine certain behaviors (e.g., eating) to certain situations (e.g., dining room table) and to refrain from performing the behavior in other situations (e.g., watching TV, talking on the phone, lying in bed reading)
  - **Time out from reinforcement:** punishment procedure in which, contingent on undesirable behavior, access to positive reinforcers is withdrawn for a brief period
  - **Response-cost:** loss of positive reinforcer after performing an undesirable behavior

Theory's Implications for Therapy (cont'd.)

- Behavior modification (cont'd.)
  - **Differential reinforcement of other behavior:** schedule of reinforcement in which reinforcement is delivered at the end of a time interval during which no instances of unacceptable behavior occurred
  - **Self-management procedures:** institutional members learn to manage or control their own behavior
  - **Habit reversal:** making a response that is incompatible with an undesirable behavior
  - **Token economy:** patients earn tokens for performing behaviors that are necessary if they are to live effectively
  - **Aversive techniques:** punishment is used to stop an undesirable behavior
  - **Shaping:** teaching a desirable behavior by reinforcing responses that successively approximate it

Theory's Implications for Education

- According to Skinner, what does not work?
  - Aversive practices
  - Permissiveness
- What does work?
  - Arranging contingencies of reinforcement so that students can learn

Theory's Implications for Society

- **Walden Two:** utopian society in which environments are structured to meet community members' needs

Evaluative Comments

- **Comprehensiveness:** initially narrow in scope because it focused almost exclusively on so-called lower animals

  – Later developments of the theory focused more on human behavior, thereby increasing the comprehensiveness of the theory

- **Precision and testability:** precise and testable

- **Parsimony:** relatively economical, but still needs some concepts to explain certain social-learning phenomena.

- **Empirical validity:** strong empirical support

- **Heuristic value:** highly stimulating to investigators in a variety of disciplines

- **Applied value:** strong applied value, especially in the areas of psychopathology and education