CHAPTER TEN
SKINNER AND STAATS: THE CHALLENGE OF BEHAVIORISM

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- B. F. SKINNER:
  - RADICAL BEHAVIORISM
- ARTHUR STAATS:
  - PSYCHOLOGICAL BEHAVIORISM
Conditioning—the process of learning associations

- **Classical Conditioning**
  - (aka Pavlovian Conditioning)
  - Reflexive or respondent behavior
  - Automatic response to a stimulus

- **Operant Conditioning**
  - Responses are learned because of their consequences
  - Behavior is strengthened by a reinforcer; diminished by a punishment
  - Behavior is voluntary

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### Classical Conditioning

- **Ivan Pavlov**
  - 1849-1936
  - Russian physician/neurophysiologist
  - Studied digestive secretions of dogs
  - Nobel Prize 1904
  - Discovered classical conditioning

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#### Pavlov’s Discovery of Classical Conditioning

- **Unconditioned Stimulus (US)** - a stimulus that naturally (automatically) brings about a response
- **Unconditioned Response (UR)** - a natural response that requires no training
- **Neutral Stimulus (NS)** - a stimulus that in the absence of conditioning does not elicit a response
- **Conditioned Stimulus (CS)** - a once neutral stimulus that becomes associated with an unconditioned stimulus to produce a **Conditioned Response**
- **Conditioned Response (CR)** - the learned response to a once neutral stimulus

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#### John Watson—Founder of Behaviorism

*Give me a dozen healthy infants, well-formed, and my own specified world to bring them up in and I'll guarantee to take any one at random and train him to become any type of specialist I might select—doctor, lawyer, artist, merchant-chief, and, yes, even beggar-man and thief, regardless of his talents, penchant, tendencies, abilities, vocations, and race of his ancestors.*

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#### Watson’s Classic “Little Albert” Experiments

- **John Watson and Rosalie Rayner**
- **Little Albert** (click to view)
ILLUSTRATIVE BIOGRAPHY: Tiger Woods

DEVELOPMENT

ILLUSTRATIVE BIOGRAPHY: Tiger Woods

DESCRIPTION

ADAPTATION & ADJUSTMENT

ILLUSTRATIVE BIOGRAPHY: Tiger Woods

COGNITIVE PROCESSES

SOCIETY

BIOLOGICAL INFLUENCES

HTTP://WWW.BOREME.COM/BOREME/ FUNNY-2006/TIGER-JUST-DO-IT-P1.PHP

PREVIEW OF SKINNER’S AND STAAT’S THEORY

<table>
<thead>
<tr>
<th>TABLE 10.1</th>
<th>Preview of Skinner's and Staats's Theory</th>
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</thead>
<tbody>
<tr>
<td>Individual Differences</td>
<td>Individuals differ in their behaviors owing to differences in reinforcement histories. In behavior theory, biological predispositions are also acknowledged.</td>
</tr>
<tr>
<td>Adaptation and Adjustment</td>
<td>Rather than considering “habit” or “traces,” it is more probable to speak of the effects of behavior in which behaviors should be changed, and which occurred, and to change them if they are incorrect.</td>
</tr>
<tr>
<td>Cognitive Processes</td>
<td>Mental processes are difficult to study because the science does not have access to them. In principle, mental processes can be explained in behavioral terms. In principle, according to radical behaviorism, such as Skinner, it should be possible to study mental processes in terms of behavioral terms.</td>
</tr>
<tr>
<td>Society</td>
<td>Society provides the conditions of learning, and therefore shapes personality. Behavioral principles explain a large portion of behavior.</td>
</tr>
<tr>
<td>Biological Influences</td>
<td>Biological differences that influence behavior are also influenced by learning.</td>
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</tbody>
</table>

RADICAL BEHAVIORISM: Skinner

B. F. Skinner

- **Burrhus Frederic Skinner**
  - Born in 1904 in Pennsylvania
- **Inventor and Writer as a Youngster**
- **Doctorate in Psychology from Harvard (1931)**
- **Professorships at Minnesota, Indiana and Harvard**
- **Died in 1990 of Leukemia**
**Behavior as the Data for Scientific Study**

- The Evolutionary Context of Operant Behavior
- The Rate of Responding

**Operant Conditioning**

**Definition:** Mode of learning in which the frequency of responding is influenced by the consequences that are contingent upon a response.

**Examples:**
- Bar-pressing in rats, reinforced by food
- Smiling in a child, reinforced by parental approval

**The Rate of Responding**

**Skinner box**
- Controls the environment
- Operant response
- Response

**Learning Principles**

- Reinforcement: Increasing the Rate of Responding
- Punishment and Extinction: Decreasing the Rate of Responding
- Additional Behavioral Techniques

**Reinforcement**—anything that increases the likelihood that the behavior will be repeated

- Positive Reinforcement: rewards or other positive consequences that follow behaviors
- Negative Reinforcement: removing an aversive stimulus; engaging in behavior to remove a “negative” stimulus

- A pat on the back for scoring the winning goal
- Taking an aspirin to get rid of a headache
**Reinforcement: Increasing the Rate of Responding**
- Positive reinforcer
- Base rate
- Primary reinforcer
- Secondary reinforcer
- Negative reinforcer

**Punishment and Extinction: Decreasing the Rate of Responding**
- **Punishment:** A stimulus contingent upon a response and that has the effect of decreasing the rate of responding
- **Extinction:** Reduction in the rate of responding when reinforcement ends

**Additional Behavioral Techniques**
- **Shaping:** Reinforcement of successive approximations of behavior
- **Chaining:** One response produces or alters some of the variables that control another response
- **Discrimination Learning:** Learning to respond differentially, depending on environmental stimuli
- **Generalization:** Responding to stimuli that are similar to, but not identical to, the stimuli present during training

**Schedules of Reinforcement**
- **Continuous Reinforcement**
- **Partial Reinforcement**
  - Fixed ratio schedule (FR)
  - Variable ratio schedule (VR)
  - Fixed interval schedule (FI)
  - Variable interval schedule (VI)

**Applications of Behavioral Techniques**
- **Therapy**
  - Behavior modification
  - Functional analysis
  - Token economies
- **Education**
  - Teaching machines (programmed instruction)
**Radical Behaviorism and Personality Theory: Some Concerns**

- **Walden Two** (Utopian community)
- Unique human capacities (including language)
- Freedom and dignity

**Psychological Behaviorism: Staats**

**Reinforcement**

- **Time-out**: A procedure or environment in which no reinforcements are given in an effort to extinguish unwanted behavior
  - Example: Removal of a disruptive child from a school class, to improve behavior

**Basic Behavioral Repertoires**

- The Emotional-Motivational Repertoire
- The Language-Cognitive Repertoire
- The Sensory-Motor Repertoire
Basic Behavioral Repertoires

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**The Emotional-Motivational Repertoire**

- A: affects and attitudes
- R: reinforcements
- D: direct behavior

Personality as a Basic Behavioral Repertoire

- knowing how to make small talk
- knowing how to tip a maître-d’

Situations

- A-R-D Theory
  - A: affects and attitudes
  - R: reinforcements
  - D: direct behavior

**Table 10.1** States’ Three Basic Behavioral Repertoires (BRs)

<table>
<thead>
<tr>
<th>Basic Behavioral Repertoire</th>
<th>Examples of Behavior</th>
<th>Examples of Behaved Property</th>
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<tbody>
<tr>
<td>Language-Cognitive</td>
<td>Speech, reading, reaction</td>
<td>Reflective before (reflection)</td>
</tr>
<tr>
<td>Emotional-Motivational</td>
<td>Arousal, emotion, reinforcement</td>
<td>Unlearned before (unlearned)</td>
</tr>
<tr>
<td>Sensory-Motor</td>
<td>Perceiving, feeling</td>
<td>Direct before (direct)</td>
</tr>
</tbody>
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**Figure 10.2** Personality as a Basic Behavioral Repertoire

Talking to new acquaintances, dining in high-class restaurants.

**Figure 10.3** Classical Conditioning of One Emotional Response (Fear)

UCS (unconditioned stimulus), such as a loud noise.

**Figure 10.4** Interaction of Religious Orientation and Task Demands on Performance on an Experimental Task

Key: — Religious words, — Transportation words

High religious individuals had higher scores in the experimental task, indicating a more rapid response.

Psychological Adjustment

- Depends on learning (basic behavioral repertoire)
- For example:
  - Emotions (phobias, depression, anxiety)
  - Social skills
  - Positive self-concept
  - Standards for behavior (perfectionism)

The Nature-Nurture Question from the Perspective of Psychological Behaviorism

- Intensive learning
- Learning builds on nature
- Biology can influence a person
  - Before learning
  - During learning
  - After learning

The Act-Frequency Approach to Personality Measurement

**Definition:**
Measuring personality traits by assessing the frequency of prototypical behaviors

**Examples:**
- Affiliation needs assessed by frequency of choosing to work with friends
- Dominance assessed by frequency of interrupting others

Personality Assessment from a Behavioral Perspective

Contributions of Behaviorism to Personality Theory and Measurement
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