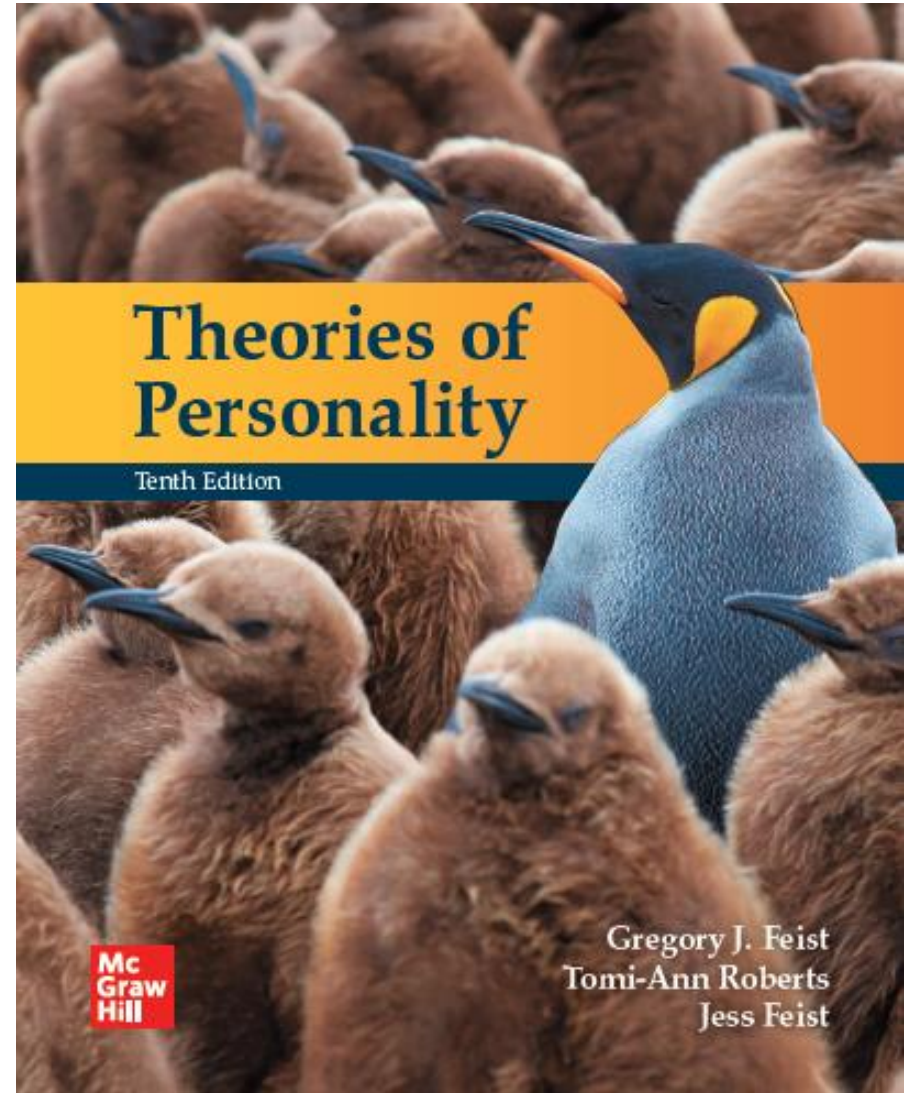
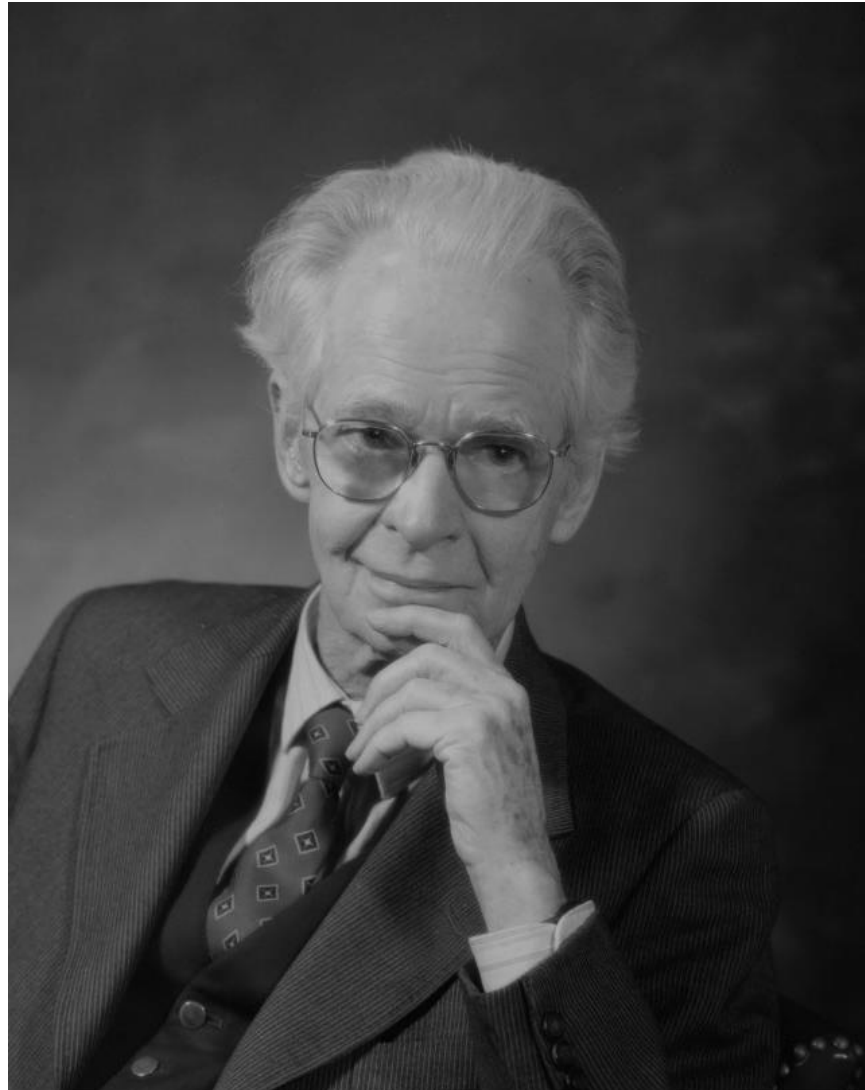


Skinner: Behavioral Analysis

Chapter 16



B. F. Skinner



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Chapter Outline

- Overview of behavioral analysis.
- Biography of B.F. Skinner.
- Scientific behaviorism.
- Conditioning.
- The human organism.
- The unhealthy personality.
- Psychotherapy.
- Related research.
- Critique of Skinner.
- Concept of humanity.

Overview of Behavioral Analysis

- Emerged from laboratory studies of animals and humans.
- Minimized speculation.
- Focused on observable behavior.
- Avoided all hypothetical constructs.
- Behavior is lawfully determined.
- Behavior is a product of environmental stimuli.

Biography of B. F. Skinner 1

- Born in Susquehanna, Pennsylvania in 1904.
- Inclined toward music and literature.
- Attended Hamilton College and earned a B A.
- Earned his P h D in psychology at Harvard in 1931.
- Began teaching at the University of Minnesota.
- Published *The Behavior of Organisms* in 1938.

Biography of B. F. Skinner ₂

- Involved with an interesting venture known as the baby tender.
- Trained pigeons to guide bombs into enemy ships in World War 2, which he demonstrated in 1944.
- *Walden Two* was also a benchmark in Skinner's professional career.
- Taught at Indiana University and at Harvard.
- Died in 1990 of leukemia.

Precursors of Skinner's Scientific Behaviorism

E.L. Thorndike.

- **Law of Effect.**

John B. Watson.

- Human behavior can be studied objectively.
- Consciousness and introspection must play no role in the scientific study of behavior.
- Goal of psychology is the prediction and control of behavior and can be best reached through study of stimulus-response connections.

Scientific Behaviorism

Philosophy of science.

- Scientific behaviorism allows for interpretation of behavior but not an explanation of its causes.

Characteristics of science.

- Cumulative.
- An attitude that values empirical observation.
- Search for order and lawful relationships.

Classical Conditioning

- A response is drawn out of the organism by a specific, identifiable stimulus.
- Behavior is elicited from the organism.
- A neutral or conditioned stimulus is paired with an unconditioned stimulus a number of times until it is capable of bringing about a previously unconditioned response.

Operant Conditioning ¹

Shaping.

- Procedure in which the experimenter, or the environment first rewards gross approximations of the behavior, then closer approximations, and finally the desired behavior itself.
- Through the reinforcement of **successive approximations**, the experimenter shapes the final complex set of behaviors.

Three conditions are present.

- The antecedent, or A.
- The behavior, or B.
- The consequence, or C.

Operant Conditioning ²

Reinforcement.

- Has two effects.
 - Strengthens the behavior.
 - Rewards the person.
- Two types of reinforcement.
 - Positive reinforcement.
 - **Negative reinforcement.**
 - The most effective way to teach a person or animal a new behavior is with positive reinforcement.
 - In positive reinforcement, a desirable stimulus is added to increase a behavior. For example, you tell your five-year-old son, Jerome, that if he cleans his room, he will get a toy. Jerome quickly cleans his room because he wants a new art set.
 - In negative reinforcement, an undesirable stimulus is removed to increase a behavior. For example, car manufacturers use the principles of negative reinforcement in their seatbelt systems, which go “beep, beep, beep” until you fasten your seatbelt. The annoying sound stops when you exhibit the desired behavior, increasing the likelihood that you will buckle up in the future.

Operant Conditioning ³

Punishment.

- The presentation of an aversive stimulus.
- Effects of punishment.
- Punishment and reinforcement compared.

	Reinforcement	Punishment
Positive	Something is <i>added</i> to <i>increase</i> the likelihood of a behavior.	Something is <i>added</i> to <i>decrease</i> the likelihood of a behavior.
Negative	Something is <i>removed</i> to <i>increase</i> the likelihood of a behavior.	Something is <i>removed</i> to <i>decrease</i> the likelihood of a behavior.

Table 1. Positive and Negative Reinforcement and Punishment

- Punishment always decreases a behavior.
- In positive punishment, you add an undesirable stimulus to decrease a behavior. An example of positive punishment is scolding a student to get the student to stop texting in class. In this case, a stimulus (the reprimand) is added in order to decrease the behavior (texting in class).
- In negative punishment, you remove a pleasant stimulus to decrease a behavior. For example, when a child misbehaves, a parent can take away a favorite toy. In this case, a stimulus (the toy) is removed in order to decrease the behavior.

Operant Conditioning ⁴

Conditioned and generalized reinforcers.

- **Conditioned reinforcers:** environmental stimuli that are not by nature satisfying but become so because they are associated with such unlearned or primary reinforcers.
 - Primary reinforcers: food, water, sex, or physical comfort.
- **Generalized reinforcers:** associated with more than one primary reinforcer.

Operant Conditioning ⁵

- Schedules of reinforcement.
 - **Fixed-ratio.**
 - **Variable-ratio.**
 - **Fixed-interval.**
 - **Variable-interval.**
- **Extinction.**
 - Tendency of a previously acquired response to become progressively weakened upon nonreinforcement.
 - **Operant extinction** is when an experimenter systematically withholds reinforcement until the probability of that response diminishes to zero.

The Human Organism ¹

Natural selection.

Cultural evolution.

Inner states.

- Self-awareness.
- Drives.
- Emotions.
- Purpose and intention.

The Human Organism ₂

Complex behavior.

- Higher mental processes.
- Creativity.
- Unconscious behavior.
- Dreams.
- Social behavior.

Control of human behavior.

- Social control.
- Self-control.

The Unhealthy Personality

Counteracting strategies.

- Escape.
- Revolt.
- Passive resistance.

Inappropriate behaviors.

- Excessively vigorous behavior.
- Excessively restrained behavior.
- Blocking out reality.
- Self-deluding responses.
- Self-punishment.

Psychotherapy

- Viewed as one of the major obstacles to a scientific study of human behavior.
- Therapist molds desirable behavior by reinforcing slightly improved changes in behavior.
- Behavior therapists play an active role in the treatment process, pointing out the positive consequences of some behaviors and the aversive effects of others.

Related Research

How conditioning affects personality.

- Murray Goddard (2018) suggested that using trait terms might mean we see, and even reinforce, more stability in on another's personalities than actually exists.

How personality affects conditioning.

Critique of Skinner

Skinner's theory is:

- Very high on generating research, guiding action, and internal consistency.
- High on falsifiability.
- Moderate on organizing knowledge.

Difficult to rate parsimony.

Concept of Humanity

- Determinism over free will, no free will.
- Optimism over pessimism.
- Causality over teleology.
- Unconscious over conscious.
- Social influence over biology.
- Uniqueness over similarity.



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