B.F. Skinner

Theory of Behavior (NOT PERSONALITY)
“It is the environment which must be changed.” – B.F. Skinner

Skinner’s Life

• Early learning about the results of crime
• Religious learning about punishment
• Defined people as “complex system[s] behaving in lawful ways” and “empty organisms”
• Early failed attempt as a novelist
• Lived his theory
• Used behaviorism with his children

Reinforcement:
The Basis of Behavior

• Respondent behavior – responses made to or elicited by environmental stimuli.
• Conditioning – substitution of one stimulus for another.
• Reinforcement – act of strengthening a response by adding reward.

Reinforcement, Cont’d.

• Extinction - process of eliminating behavior by withholding reinforcement.
• Operant behavior – behavior emitted spontaneously or voluntarily that operates on the environment to change it.

Behavior controlled by consequences

• Respondent behavior is UNLEARNED (reflex)
• Operant behavior is learned and directly related to a stimulus
• Pavlov’s Dogs an example of Classical Conditioning
• Reinforcement (positive and negative)
• Extinction

Skinner’s Focus: Operant Conditioning

• Developed the Skinner Box
• Animal Research Extensive
• Reinforcement schedules
  – Variable and fixed intervals (time)
  – Variable and fixed ratios (number)
• Superstitious behavior and your lucky shirt
Examples of:

- Positive Reinforcement
- Negative Reinforcement
- Punishment

Operant Conditioning & the Skinner Box

- **Operant-conditioning** – change in consequences of a response will affect rate of response.
  - Rat presses bar – gets food
  - Food as reinforcer for pressing bar
  - More pressing → more food
  - Next day – can predict rat will press bar

Skinner Box

Schedules of Reinforcement

- **Reinforcement schedules** – Patterns or rates of providing or withholding reinforcers.
  - Fixed interval – reinforcer following a fixed amount of time after response.
  - Fixed ratio – reinforcer following a fixed number of responses.
  - Variable interval – reinforcer after unpredictable amount of time.
  - Variable ratio – reinforcer after unpredictable number of responses.

Successive Approximation

- So how do you train a fish to bite a ball, go through a hoop, and around a stick?
- How do you learn to play “Mary Had A Little Lamb”?

Why we are not completely at the whim of the stimuli

- Self-control
- Stimulus avoidance
- Self-administered satiation
- Aversion stimulation
- Self-reinforcement
Practical Application of Skinner’s Theory

- **Token Economies**
  - Severely and Persistently Mentally Ill
- **Behavior Modification Programs**
  - School programs
- **Punishment vs. Reinforcement**
  - Prison and jail

Applications of Operant Conditioning

- **Behavior modification** – therapy that applies principles of reinforcement for changing.
- **Token economy** – tokens in exchange for valued objects or privileges.
- State mental hospital – tokens earned for hygiene, work; privileges of outings and meetings.
- Behavior change does not carry to other settings.

Applications, Cont’d.

- **Punishment** – application of aversive stimulus to decrease behavior.
- Effective only in short-term.
- **Negative reinforcement** – strengthening response by removal of aversive stimulus.
- Consequences not as predictable as positive reinforcement.

Questions About Human Nature

- We are shaped by experience.
- No reference to ultimate or necessary goal.
- People function like machines; no choices to act freely.
- Not necessarily pessimistic; people can change environments.

Assessment in Skinner’s Theory

- **Functional analysis** – Approach to study of behavior to assess
  - The frequency of the behavior.
  - Situation in which behavior occurs.
  - Reinforcement associated with behavior.
- Direct observation of behavior.
- **Sign-versus-sample approach** – assessing personality vs. assessing behavior.

Research on Skinner’s Theory

- Intensive study of single subjects.
- **Reversal experimental design.**
  - Establish baseline
  - Conditioning stage: introduce independent variable (IV)
  - Reversal: determine whether other variable affects behavior (no IV)
  - Reconditioning: re-introduce IV
- Results of other experiments support Skinner’s ideas.
Reflections on Skinner’s Theory

- Focus on overt behavior ignores uniquely human qualities.
- Hard to extrapolate from pigeon to society.
- **Instinctive drift** – substitution of instinctive behaviors for behaviors that had been reinforced.
- Skinner was potent force in psychology.
- Dominance later challenged by cognitive movement.

Skinner was not the typical psychologist of his time

- No use for dream analysis, projective assessment
- If he couldn’t observe it, he didn’t study it, write about it, or think it mattered too much
- Research was physiological, detailed, controlled
- Reversal design: baseline, experiment, reversal (removal)

Albert Bandura
Observational Learning Theory (later called Social Learning Theory)

Life History

- Canadian – University of British Columbia
- Educated in US at University of Iowa
- Stanford University
- APA President
- 2006 APA’s Gold Medal Award for Life Achievement

Learn by observing

Cognitive process - think about what you observed

Model or don’t model

<table>
<thead>
<tr>
<th>Table 13.1 Observational learning processes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Attentional processes</strong></td>
</tr>
<tr>
<td><strong>Retention processes</strong></td>
</tr>
<tr>
<td><strong>Prediction processes</strong></td>
</tr>
<tr>
<td><strong>Incentive and motivational processes</strong></td>
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What are you going to learn and model?

- Depends on the model
- Depends on you
  - Self-confidence
  - Self-esteem
- What are the rewards or punishment?
  - Meaningful rewards
  - Observation of a model being rewarded or punished

Modeling

- Similar to Skinner but his theory is that behavior is also influenced by indirect reinforcement
- Learn by observing others and patterning our behavior after others
- Bobo Doll Studies of aggression
- Social influence on disinhibition (crowd behavior)

Modeling: The Basis of Observational Learning

- Characteristics of the models:
  - Similarity
  - Age
  - Sex
  - Status
  - Prestige

Famous Bobo Doll Studies

- Bobo Doll Studies:
  - Adults acted violently toward the doll.
  - Children modeled the violent behavior.
  - These children (experimental) were twice as violent as those who did not witness violence.

Bandura one of the first to recognize the impact of television violence on children

Motivations

- Past Reinforcements
- Promised Reinforcements
- Vicarious Reinforcement
- The above can also be punishments with the following ill effects: compensation, inactivity, escapism
- We can learn without reinforcement
Bandura’s idea of the Self

- Self-reinforcement (conscience, superego)
- Self-efficacy - do we meet our expectations?
  - Need reachable goals
  - Need good models
  - Need encouragement
  - Need physical health

Self Reinforcement and Self-Efficacy

- The self is a set of cognitive processes and structures concerned with thought and perception.
- **Self Reinforcement**
  - Administering rewards/punishments to oneself for meeting, exceeding or falling short of one’s own expectations or standards.

Self Reinforcement and Self-Efficacy, Cont’d.

- **Self-Efficacy**: The power of believing you can.
- Our feeling of adequacy, efficiency, and competence in coping with life.
  - Low self-efficacy
  - High self-efficacy

Self Reinforcement and Self-Efficacy, Cont’d.

- Sources of information about self-efficacy.
  - Performance attainment - Prior achievements or failures.
  - Vicarious experiences - Seeing other perform successfully.
  - Verbal persuasion - Reminding people of their abilities.
  - Physiological and emotional arousal - Fear, tension, and anxiety.

Developmental Stages of Modeling and Self-Efficacy

- Childhood
  - Infancy – immediate imitation
  - Age 2 – imitate sometime after behavior
  - Parental influence diminishes over time
- Adolescence – coping with new demands due to transitions.
- Adulthood
  - Young adulthood
  - Middle years
- Old Age – Reassessments are difficult.

Behavior Modification

- **GOAL**: Modify learned behaviors society considers undesirable.
- Fears and Phobias: Applied modeling techniques to eliminate fears and other intense emotional reactions.
  - Children afraid of dogs.
  - Snake phobias.
  - Guided participation.
  - Covert modeling.
  - Modeling can affect our ability to tolerate pain.
Behavior Modification, Cont’d.

- Anxiety
  - Modeling film to help ready children for surgery.
  - Fear of hospitalization and dental treatments.
  - Test anxiety.
- Ethical issues in behavior modification.
  - Criticism – technique is manipulative.
  - Bandura: Behavior modification increases personal freedom.

Questions about Human Nature

- Reciprocal Determinism – Individuals are neither powerless nor completely free.
- Triadic reciprocality: Interaction between behavioral, cognitive, and environmental variables.
- Most behaviors are learned with genetics playing a minor role.
- Childhood experiences are important but can be unlearned later.

Assessment Techniques

- Assessment techniques:
  - Direct observation
  - Self-report inventories
  - Physiological measurements

Research on Bandura’s Theory

- Favors well-controlled laboratory studies.
- Self-Efficacy
  - Gender and age differences
  - Physical appearance
  - Academic performance
  - Career choice and job performance
  - Physical health
  - Mental health
  - Coping with stress

Research, Cont’d.

- Collective efficacy – Groups may develop a sense of efficacy
- Relationship between aggressive behavior and television and video games
  - Seeing violence begets violence
  - Violent behavior follows viewing violent film
  - Violent video games results in an increase in aggressive behavior

Reflections on Bandura’s Theory

Contributions

- It is objective and amenable to study.
- Great deal of empirical support.
- Observational learning and behavior modification are pragmatic.
- Bandura’s ideas can be applied to the resolution of individual and national problems.
Reflections on Bandura’s Theory

Criticisms
• Focus on overt behavior ignores human aspect of personality.
• Treats just the symptom not the cause.

Rotter’s Life
• American born
• Family impacted by Great Depression
• Early interest in social justice and personality development
• Influenced by Freud, Adler, and Kelly
• One of the first trained in our current model of clinical psychology

How Personality Develops
• It is learned (not innate)

You’re looking for a job when you finish your degree. You see an ad for one that pays $40,000 and one that pays $60,000. Classic behaviorism would say you’d go for the big money but according to Rotter’s social learning theory there’s something that behaviorism leaves out. What if you think you haven’t got a hope of getting the job that’s offering $60,000 but a good chance of getting the $40,000 one? So if you think your chance of getting the big job is 50/50 Rotter would say that mathematically it’s worth $30,000 to you, whereas if you think you’re a shoo in for the other job (i.e. a 100% likely to get it) then that job is worth $40,000 to you. So the lower paying job has a HIGHER EXPECTED VALUE.
Behavior Potential

- Definition: Likelihood that a particular behavior will occur in a given situation
- Subjective judgment by each person
- Behavior is overt and covert
- Covert includes internal cognitive process, rationalization, planning, etc.

Expectancy Freedom of Movement

- Our belief that if we behave a certain way in a given situation, a predictable reinforcement will follow
- Influenced by past experience
- Strength of belief in reinforcement is varies with experience (80% that x will happen if I do y)
- From this we learn to generalize

What reinforces you? (Reinforcement Value)

- Rotter allowed for personal preference
- Reinforcement value is the basis for preferring one reinforcer over another
- One person prefers chocolate, another pizza, another money, social contact
- Minimal goal (reward) level (i.e., How much money is enough?)

Behavior guided by the Psychological Situation

- The Psychological Situation sums up the internal and external factors that influence perception and ultimately behavior
- Interactionist approach
- Mediating Effects

Locus of Control

- Internal: reinforcement caused by our own behavior
- External: reinforcement under control of others, fate, luck
- Perceived Control
- Internal-External (I-E) Scale
- Children’s version

Table 14.1 Sample items from the I-E Scale

<table>
<thead>
<tr>
<th>Item</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>a. Many of the unhappy things in people’s lives are partly due to bad luck.</td>
</tr>
<tr>
<td>2.</td>
<td>a. One of the major reasons why we have wars is because people don’t take enough interest in politics.</td>
</tr>
<tr>
<td>3.</td>
<td>a. In the long run people get the respect they deserve in this world.</td>
</tr>
<tr>
<td>4.</td>
<td>a. The idea that teachers are unfair to students is nonsense.</td>
</tr>
<tr>
<td>5.</td>
<td>a. Without the right breaks one cannot be an effective leader.</td>
</tr>
<tr>
<td>6.</td>
<td>a. No matter how hard you try some people just don’t like you.</td>
</tr>
<tr>
<td>7.</td>
<td>a. People who can’t get others to like them don’t understand how to get along with others.</td>
</tr>
</tbody>
</table>

Locus of Control

**Age and gender differences:**
- Attempts to control external environment begins in infancy.
- Girls score higher than boys on internal locus of control.
- Differences between adult males and females context specific.

**Racial and socioeconomic differences:**
- Higher external locus of control in lower SES samples.
- Differences between Caucasians and Blacks, Hispanics, Native American, and Asians.
- Individualistic vs collectivist and structured culture.

Locus of Control

**Behavioral differences** - Internally oriented people:
- Daydream about success rather than failure.
- Acquire and process more information.
- Experience greater personal choice.
- Are more popular.
- Have higher self esteem.

**Behavioral differences (cont’d.)** - Internally oriented people:
- Attract people they can manipulate.
- Less likely to have emotional problems.
- Less likely to be alcoholics.
- Less anxiety, depression, and suicide.

Locus of Control

**Physical health differences:** Internally oriented people:
- Physically healthier.
- More cautious about their health.
- More likely to wear their seat belts.
- Exercise.
- More likely to quit smoking.
- More likely to believe they can overcome an illness.

**Developing locus of control in children** – Learned in childhood and relates to parental behavior

**Reflections on Locus of control** –
- Strong relationship between concept of locus of control and Bandura’s concept of self-efficacy
- Difference is that locus of control can be generalized whereas self-efficacy is situation specific
- Rotter’s research is highly rigorous
Zuckerman

A “Sensational” Theory

Martin Zuckerman

- Sensation seeking: need for varied, novel, complex sensations and experiences
- Sensation Seeking Scale
  - Thrill and adventure seeking
  - Experience seeking
  - Disinhibition
  - Boredom susceptibility

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Table 14.2 Sample items from the Sensation Seeking Scale, Form V

<table>
<thead>
<tr>
<th>Item</th>
<th>High sensation seekers</th>
<th>Low sensation seekers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. a. I like wild uninhibited parties.</td>
<td>b. I prefer quiet parties with good conversation.</td>
<td></td>
</tr>
<tr>
<td>2. a. I get bored seeing the same old faces.</td>
<td>b. I like the comfortable familiarity of everyday friends.</td>
<td></td>
</tr>
<tr>
<td>3. a. A sensible person avoids activities that are dangerous.</td>
<td>b. I sometimes like to do things that are a little frightening.</td>
<td></td>
</tr>
<tr>
<td>4. a. I would like to take off on a trip with no preplanned or definite routes or timetables.</td>
<td>b. When I go on a trip I like to plan my route and timetable fairly carefully.</td>
<td></td>
</tr>
<tr>
<td>5. a. I would like to go parachute jumping.</td>
<td>b. I would never want to try jumping out of a plane with or without a parachute.</td>
<td></td>
</tr>
<tr>
<td>6. a. There is altogether too much portrayal of sex in movies.</td>
<td>b. I enjoy watching many of the sexy scenes in movies.</td>
<td></td>
</tr>
<tr>
<td>7. a. I am not interested in experience for its own sake.</td>
<td>b. I like new, exciting experiences and sensations even if they are a bit frightening, unconventional, or illegal.</td>
<td></td>
</tr>
<tr>
<td>8. a. People should dress according to some standard of taste, neatness, and style.</td>
<td>b. People should dress in individual ways, even if the effects are sometimes strange.</td>
<td></td>
</tr>
</tbody>
</table>


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Table 14.3 Self-descriptions of high and low sensation seekers

<table>
<thead>
<tr>
<th>High sensation seekers</th>
<th>Low sensation seekers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enthusiastic</td>
<td>Frightened</td>
</tr>
<tr>
<td>Playful</td>
<td>Panicky</td>
</tr>
<tr>
<td>Adventurous</td>
<td>Tense</td>
</tr>
<tr>
<td>Curious</td>
<td>Nervous</td>
</tr>
<tr>
<td>Imaginative</td>
<td>Shaky</td>
</tr>
<tr>
<td>daring</td>
<td>Feared</td>
</tr>
<tr>
<td>Zany</td>
<td>Worried</td>
</tr>
<tr>
<td>Mischiefness</td>
<td>Upset</td>
</tr>
</tbody>
</table>


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Different Types of Risk Takers

- Antisocial
- Adventure
- Prosocial

Sensation Seeking interacts with...

- Demographics
- Behaviors
- Introversion/Extroversion
- Autonomy
- Cognitive processing speed
- Attentiveness
- Political and religious attitudes
- Physiological arousal
- Genetic link
- Complexity
- Helping profession tendencies
Sensation Seeking, Cont’d.

• Non-impulsive socialized sensation seeking vs impulsive unsocialized sensation seeking.

• Characteristics of sensation seekers-
  – Young vs old
  – Men vs women
  – Racial and cultural differences

• Behavioral differences-
  – Drug use / selling
  – Shoplifting
  – Reckless driving
  – Risky sexual and physical behavior
  – Job performance

Sensation Seeking, Cont’d.

• Personality differences:
  – Relationship to extraversion
  – Egocentrism
  – Autonomy
  – Self-fulfilment
  – Openness to experience and agreeableness

Sensation Seeking, Cont’d.

• Cognitive processes:
  – Information processing
  – Attentional focus
  – IQ scores
  – Creativity
  – Fantasy world

Sensation Seeking, Cont’d.

• Occupational preferences - High sensation seekers choose different jobs than low sensation seekers.

• Attitudes - Differences in political and religious beliefs.

• Physiological differences – Differences in tolerance for pain and increased arousal.

Sensation Seeking, Cont’d.

• Heredity vs. environment:
  – Research indicates over 50% accounted for by genetic factors.
  – Parental influence.

• Reflections:
  – Concept has stimulated a great deal of research.
  – Commonsense appeal.