Behavior

Classical Conditioning
Operant Conditioning
Social Norms
Cognitive Dissonance
Stages of Change
Classical Conditioning

- Ivan P. Pavlov (1849-1936)
- Russian physiologist
- Credited for the first systematic investigation into classical conditioning.
- Won the Nobel Prize for his discoveries on digestion.

(Introduction to Learning and Behavior, 2002 – Pwell, R, Symbaluk, D., Maconald, S.)
Classical Conditioning

Before conditioning

FOOD (UCS)    SALIVATION (UCR)

BELL            NO RESPONSE
Classical Conditioning

- That was easy!
- Environmental behavioral change
- Knowing about your behavior can make you more conscious of your decisions.
- The Office – Altoids
Are you being classically conditioned?

When I go into this place I feel cool, why is that?

Why do I feel I need these clothes?
Operant Conditioning

- Edwin L. Thorndike
  (1874 – 1949)
  - Law of Effect
  - Cat in box maze

- B. F. Skinner
  (1904-1990)
  - Learning by consequences
  - Skinner box

(Introduction to Learning and Behavior, 2002 – Pwell, R, Symbaluk, D., Maconald, S.)
Operant Conditioning Chamber

Diagram of a rat in a Skinner box with labels such as 'Speaker', 'Signal lights', 'Lever', 'To food dispenser', 'Food pellet', 'Electric grid', and a sign saying 'Will press lever for food'.
Operant Conditioning: Self-control

- **Physical Restraint**
  - Physically manipulate the environment to prevent the occurrence of some problem behavior.

- **Depriving and Satiating**
  - Deprive or satiate yourself, thereby altering the likelihood of a behavior.
Operant Conditioning

- **Doing something else**
  - To prevent yourself from engaging in certain behaviors, perform an alternate task.

- **Self Reinforcement and Self Punishment**
  - A self control tactic that might seem obvious from a behavioral standpoint is to simply reinforce/punish your own behavior.
Self Reinforcement and Self Punishment

Four types of Contingencies

Positive Reinforcement
Negative Reinforcement
Positive Punishment
Negative Punishment
Operant Conditioning

- **Positive Reinforcement** – Consist of the *presentation* of a stimulus (usually considered pleasant or rewarding) following a response, which then leads to an *increase* in the future strength of that response.

- **Negative Reinforcement** – Is the *removal* of a stimulus (usually considered unpleasant or aversive) following a response that then leads to an *increase* in the future strength of that response.
Operant Conditioning

- **Positive Punishment** – Consist of the *presentation* of a stimulus (usually considered unpleasant or aversive) following a response, which then leads to a *decrease* in the future strength of that response.

- **Negative Punishment** – Consist of the *removal* of a stimulus (usually considered pleasant or rewarding) following a response, which then leads to a *decrease* in the future strength of that response.
Four Types of Contingencies

When you want to increase a behavior, **reinforce**.
When you want to decrease a behavior, **punish**.

When you introduce a stimulus, it’s called **positive**.
When you take away a stimulus, it’s called **negative**.

<table>
<thead>
<tr>
<th>Positive Reinforcement</th>
<th>Negative Reinforcement</th>
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</thead>
<tbody>
<tr>
<td>(Treating)</td>
<td>(Nagging)</td>
</tr>
<tr>
<td>Positive Punishment</td>
<td>Negative Punishment</td>
</tr>
<tr>
<td>(Spanking)</td>
<td>(Grounding)</td>
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</tbody>
</table>
Operant Conditioning

- How does operant conditioning fit into our daily lives?

- How could operant conditioning be used to create or reduce behavior change to better the environment?
Social Norms

A general rule of conduct reflecting standards of social approval and disapproval

- What are some social norms relating to environmental behaviors?
  - How do they influence you?
  - Are you comfortable challenging them?
What leads to changes in behavior or attitudes?

**Cognitive Dissonance Theory**

Holding inconsistent cognitions (thoughts) leads to psychological tension that people become motivated to reduce.
Cognitive Dissonance
Cognitive Dissonance

Step One: Unwanted consequence
Step Two: Personal Responsibility
Step Three: Physiological Arousal
Step Four: Attributing arousal to behavior

Physiologic arousal and its interpretation

Behavior

Antecedent Conditions that produce Discomfort

Attitude Change
Necessary Conditions

- People do not change their attitude every time they behave inconsistently.
- The following conditions intensify dissonance:
  - perceived freedom
  - insufficient justification
  - self-relevance of attitude
  - negative outcomes
Cognitive Dissonance

“I say I care for the environment, yet I just realized that in my daily routine I rarely think about how my actions affect the environment.”

How would you reduce dissonance?
Reducing Cognitive Dissonance

**Techniques**
- Change your attitude.
- Change your perception of the behavior.
- Add consonant cognitions
- Minimize the importance of the conflict.
- Reduce perceived choice.

**Examples**
- The environment isn’t as important as I said it was.
- Recycling/ buying local doesn’t really make that much of a difference.
- I think about the environment more than my peers.
- I am such a busy person I don’t have time to think about this.
- I had no choice: our society makes it necessary to think of money first and foremost.
Reducing Cognitive Dissonance

- We could also change our behaviors!
  - “Wow, I didn’t realize I did this! For now on I am going to be aware of my behaviors.”
Cognitive Dissonance in Action

1. I do things for a reason.
2. I went without air conditioning for no reason.

DISSONANCE!
Cognitive Dissonance in Action

(1) I do things for a reason.
(2) I went without air conditioning because I believe in energy conservation!
Initiation

Dissonance starts with:

Inconsistent attitudes, thoughts, and behavior
How do we change our behavior?

<table>
<thead>
<tr>
<th>Stages of Behavior Change Continuum</th>
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<tbody>
<tr>
<td>1. Unaware (Precontemplation)</td>
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<tr>
<td>2. Aware (Contemplation)</td>
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<tr>
<td>3. Concerned (Commitment)</td>
</tr>
<tr>
<td>4. Preparation</td>
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<tr>
<td>5. Action</td>
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<tr>
<td>6. Maintenance</td>
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# Using the Stages of Change Model

<table>
<thead>
<tr>
<th>Stage</th>
<th>Definition</th>
<th>Potential Change Strategies</th>
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</thead>
<tbody>
<tr>
<td>Precontemplation (unaware)</td>
<td>Has no intention of taking action within the next six months</td>
<td>Increase awareness of need for change; personalize information about risks and benefits</td>
</tr>
<tr>
<td>Contemplation/Commitment</td>
<td>Intends to take action in the next six months</td>
<td>Motivate; encourage making specific plans</td>
</tr>
<tr>
<td>Preparation</td>
<td>Intends to take action within the next thirty days and has taken some steps in this direction</td>
<td>Assist with developing and implementing concrete action plans; help set gradual goals</td>
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<tr>
<td>Action</td>
<td>Has changed behavior for less than six months</td>
<td>Assist with feedback, problem solving, social support, and reinforcement</td>
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<tr>
<td>Maintenance</td>
<td>Has changed behavior for more than six months</td>
<td>Assist with coping, reminders, finding alternatives, avoiding relapses.</td>
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*from Theory at a Glance from the National Cancer Society*