Operant Conditioning

The basic learning process that involves changing the likelihood of a behavior being repeated by manipulating the consequences of that behavior. Unlike classical conditioning that involves involuntary reflexes/behavior, operant conditioning involves voluntary behavior.

Behaviors that are reinforced are more likely to be repeated
Behaviors that are punished are more likely to be reduced.

Reinforcements and punishments are defined by the effect they produce.
**Descriptions of Reinforcement and Punishment**

Reinforcement: The occurrence of a stimulus or event that follows a response or behavior that has the consequence (effect) of increasing the likelihood of that behavior or response to be repeated or maintained.

Punishment: The occurrence of a stimulus or event that follows a response or behavior that has the consequence (effect) of decreasing the likelihood of that behavior or response to be repeated or maintained.

<table>
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<tr>
<th>STIMULUS is</th>
<th>BEHAVIOR that Increases</th>
<th>BEHAVIOR that Decreases</th>
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<td>Addition (+)</td>
<td>Positive reinforcement: The likelihood a behavior or response will increase when it is followed by the addition or application of a reinforcing stimulus. Examples: Aggressive behavior gets you results, a teacher’s praise for turning in homework on time or dog biscuits for doing a trick.</td>
<td>Positive punishment (punishment by application): The likelihood a behavior or response will decrease when it is followed by the addition or application of an aversive stimulus. Examples: Spanking a dog for getting into the garbage, scolding a coworker for making a mistake.</td>
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<td>Removed (-)</td>
<td>Negative reinforcement: The likelihood of a behavior or response to increase when it is followed by the removal, avoidance, or escape of an unpleasant stimulus. Example: Smoking to relieve anxiety. Skipping class to avoid a bully.</td>
<td>Negative punishment (punishment by removal): The likelihood a behavior or response will decrease when it is followed by the removal of a reinforcing stimulus. Examples: Time-out, or the loss of privileges (driver’s license, video game, etc.) for misbehaving.</td>
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Identify the following as being:
  (a) positively reinforced
  (b) negatively reinforced
  (c) positive punished (punishment by application)
  (d) negative punished (punishment by removal)

Ask yourself three questions:
  (1) What is the key behavior?
  (2) Is the likelihood the behavior is going to increase or
decrease (this defines it as a reinforcement or
punishment)?
  (3) Does the consequence apply or remove/avoid (this
defines it as either positive or negative)?

To identify what type of reinforcement or punishment it is, you
should break it down into sub-problems.

Examples:
  A teacher praises the student for turning their homework on
time.
  A teacher stops criticizing the student for their late work when
he turns their homework in on time.

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<tr>
<th>Behavior</th>
<th>Consequence</th>
<th>Future Behavior</th>
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<td>Student turns in their homework on time.</td>
<td>The teacher praises the student</td>
<td>The student increasingly turns in homework on time</td>
</tr>
<tr>
<td>Student turns in homework on time</td>
<td>The teacher stops criticizing the student</td>
<td>The student increasingly turns in homework on time</td>
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The teacher verbally reprimands a student for interrupting the teacher.
The teacher takes away recess privileges for interrupting the teacher.

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<td>Student interrupts the teacher</td>
<td>The teacher verbally reprimands the student</td>
<td>The student stops interrupting the teacher</td>
</tr>
<tr>
<td>The student interrupts the teacher</td>
<td>The teacher takes away recess privileges</td>
<td>The student stops interrupting the teacher.</td>
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**Examples of Negative Reinforcement**

Negative reinforcement: A situation in which a response is followed by the *removal, avoidance, or escape* of a punishing stimulus, that increases the likelihood that the response will be repeated in similar situations.

1. Jane stops telling her husband how she feels to avoid getting yelled at by him.
2. Smoking to relieve anxiety.
3. Smoking helps a person avoid the withdrawal symptoms of nicotine.
4. Using caller ID or the answering machine to answer the phone and avoid telemarketers.
5. Giving into your dog that barks at the dinner table until fed.
6. Small doses of alcohol can initially make people feel good, relaxed and sociable. When alcohol is eliminated from the body, these feelings can be replaced with drowsiness. To avoid these withdrawal effects, people may be motivated to drink more to maintain this initial pleasant buzz.
7. Giving into an argument.
8. Saying "uncle" to stop being beaten.
9. Following prison rules to be released from confinement.
10. Feigning a stomachache to avoid school.
11. Skipping class because you don’t like it.
12. Putting on a seatbelt to stop an irritating buzz.
13. Turning down the volume of a very loud radio.
14. I never call home to talk to my parents because mother always seems to have something bad to say to me.
15. Avoiding spiders or snakes because you don’t like them.
Problems with Punishments

The well-known behaviorist B.F. Skinner was strongly opposed to the use of punishments because of several drawbacks. Punishments do not promote appropriate or desired behavior to take the place of inappropriate behavior. Punishments can make the person who has been punished feel anxious, fearful, resentful and angry. The effects of punishments on behavior tend to be temporary.

In addition to these problems, punishments have other problems and dangers associated with them (see In-Focus 5.3: Alternatives to Punishments, p 213). To effectively use punishments:

- they need to immediately follow the response and,
- they need to be applied consistently.

Examples:
- Getting a ticket for speeding.
- Getting yelled at for carrying a microscope with one hand.

What are examples where punishments may not be effective?

Despite the problems with punishments, parents, employers, leaders, nations, etc. frequently use punishments.

Why do you think so?

What are specific issues where punishments are used, and the specific problems that are created?

What are the alternatives?
What are examples where punishments are being used by parents, employers, leaders, nations, etc. to shape behavior and appear to be ineffective and/or has some of the drawbacks of the use of punishments?

For example:

- The IRS use punishments and penalties for filing your taxes late. I think that this helps foster a negative image of the IRS and they should reinforce people for paying their taxes early.
- Although it is debatable, U.S. economic sanctions rarely shapes the behavior of other nations. It creates negative feelings towards the U.S. and has unintended consequences of hurting the civilians and not the government of those nations.

What are examples where reinforcements could be used in substitution or in conjunction with punishments to shape behavior?

For example,

- There was a police program that reinforced people for wearing seatbelts instead of not wearing them.
- There was a program in Eugene that rewarding clerks/stores for carding people, rather than punishing them for selling to minors and not carding.
Using Operant Conditioning to Explain “Real-Life” Events

Nations that did not support the United States invasion of Iraq in 2003 are excluded from bidding on lucrative contracts in rebuilding Iraq (France, Russia, Germany, Canada)
The U.S. cut off military aid to 35 friendly countries in retaliation for their support of the International Criminal Court (ICC) and refusal to exempt U.S. soldiers from the ICC’s jurisdiction.
Will small fines (caps on punitive damages) deter large corporations (eg. Microsoft, Phillip Morris, G.E./Westinghouse/NBC, Bristol-Myer) from breaking the law?
Will small fines (caps on punitive damages) deter small businesses from breaking the law?
During the Seattle WTO protest, why did the media show cover the anarchists who broke windows and not the reason for the protest? Why will the media do this in the future? What effect does this have on “the public mind”?
When a woman tells an abusive partner “what she really thinks”, and the abusive partner (usually a man) yells at her for this behavior, what will occur in the future?
   How can you make this into an example of classical conditioning?
Why do politicians, friends, coworkers, significant others tell us what we want to hear?
What happens when we tell people what they want to hear?
   Do we tend to reinforce their behavior?
   Do we tend to punish their behavior?
   What are the effects on society?
True words are not beautiful
Beautiful words are not true

What kind of society is created when we reinforce people for telling us what we want to hear?
And punish people for telling us what we don’t want to hear?

How do reinforcements and punishments affect our perception of social issues and “the public mind”? 

**Political debates:** People do not watch debates that have substance, but those that have “conflict” (mudslinging, attacks, drama, etc.), hence, debates with substance become less likely, and those with less substance get reinforced.

**Political debates:** People say they want political debates to be filled with substance. However, many people say that they are “boring” and don’t attract ratings. This doesn’t reinforce the networks, and won’t continue to air political debates that try to get at the issues.

**Political coverage:** Who will be more critical of President George W. Bush or former President Bill Clinton: Reporters on the Washington beat, or those who aren’t? Why?

**Political advertisements:** Political advertisements have very little substance and appeals to the emotions (via conditioning), rather than the rational, thoughtful part of the mind because they are more effective in influencing our behavior. Since they work (reinforced), politicians and their strategists will use them. Until we stop being influenced by them, politicians will use them less.
Product advertisements: Ads for products are now oriented at the images they create and emotions they evoke. It works (reinforcement). Most of the people who wear athletic shoes are not athlete, but we create an image and social environment that makes it more acceptable (CC).
Television programming: We don’t want violence or sexual content on television, reality television, “trash TV”, but people watch these shows with violence and “sex” in it, reinforcing the networks.

Television programming and novelty: People like novelty and like things that are new and “different”. Even if it is the same thing repackaged in a different way. News media and entertainment cater to this and it news follow-ups can seem “stale” and “old news”.

Why do people lie?: People say that you shouldn’t lie. However, we are reinforced for lying and punished for telling the truth. Along a similar line, if you get reinforced for telling people what they want to hear (regardless if this is what they should hear), you are more likely to repeat this behavior in the future.

Tax Cuts: Politicians get reinforced (by being voted back in) for cutting taxes. Politicians rarely get punished for cutting social programs.
You should review:
   Alternatives to punishments
   Enhancing the use of reinforcements
   Shaping

In addition, identify examples of reinforcement and punishments in “the real-world” to shape behavior
Alternative Strategies to Positive Punishment, p. 213

1. Reinforce an incompatible behavior.
   Reinforce an alternative behavior that is both constructive and incompatible with the problem behavior. For example, reinforce people for coming to class instead of skipping. Reinforce sharing, not selfishness. Reinforce wearing a seatbelt, not when a driver isn’t wearing the seatbelt. The procedure works best when it is used very consistently and when potent positive reinforcers are used.

2. Stop reinforcing the problem behavior to begin the process of extinguishing the problem behavior.
   It is important that when the extinction process is initiated, the problem often temporarily increases. Expect this.
   Once you begin, it is critical to be consistent in not reinforcing the problem behavior.

3. Reinforce the nonoccurrence of the problem behavior.
   This strategy requires close monitoring of the individual to ensure that a positive reinforcer is delivered only after the behavior has not occurred. For example, reinforce sales clerks for checking identification when people buy alcohol and cigarettes, instead of punishing them when they don’t.

4. Remove the opportunity to obtain positive reinforcement (eg. negative punishments).
   The reinforcers might be difficult to identify and eliminate.
Often these strategies to shape behavior are used in combination with each other. What makes implementing these techniques difficult?

It is difficult to remember to use an alternate strategy—especially if you are under stress. You have to make a decision under uncertainty:

- It is difficult to make a decision about when to use a reinforcement or punishment. If a child is crying, it is difficult to decide whether or not you should reinforce that behavior or not reinforce that behavior. You have to decide in a matter of moments and don’t have time to deliberate or assess the situation.

- Sometimes it is difficult to assess whether a child is crying for attention or if there is a real problem. Depending on how you interpret the motive for crying, affects your choice of type of reinforcement or punishment.

Using alternatives to punishments require vigilance and persistence.
Enhancing the Effectiveness of Positive Reinforcements

Remember: positively reinforce the behaviors you want to increase.  
Make sure that the reinforcer is strongly reinforcing the individual whose behavior you are trying to modify.  
The positive reinforcement should be delivered immediately after the preferred behavior occurs.  
The positive reinforcer should initially be given every time the preferred behavior occurs. Once the behavior is well established, gradually reduce the frequency of reinforcement.  
Use a variety of positive reinforcements.  
Capitalize on the Premack principle—desired activities are allowed provided the less desired behavior is completed (you must eat your spinach before you can have dessert, or you must take a bath before you can play your game).  
Encourage the individual to engage in self-reinforcement in the form of pride, sense of accomplishment and feelings of self-control. Remember, reinforcements affect behaviors, not attitudes. When behavior is engaged in for a specific reason (a reinforcer or punishment), attribution for the behavior is external, not internal. (See the overjustification effect).
Thinking about the use of Reinforcements and Punishments

Identify or describe examples of reinforcements and punishments being used to shape behavior at work, school, home, etc.

What are examples where punishments are being used, and are probably not effective in shaping behavior?

What are examples where punishments are being used by parents, employers, leaders, nations, etc. to shape behavior and appear to be ineffective and/or has some of the drawbacks of the use of punishments?

Despite the problems with punishments, parents, employers, leaders, nations, etc. frequently use punishments.

How do reinforcements and punishments affect our perception of social issues and “the public mind”?

What about the social issue of privatizing prisons?