

Operant Conditioning

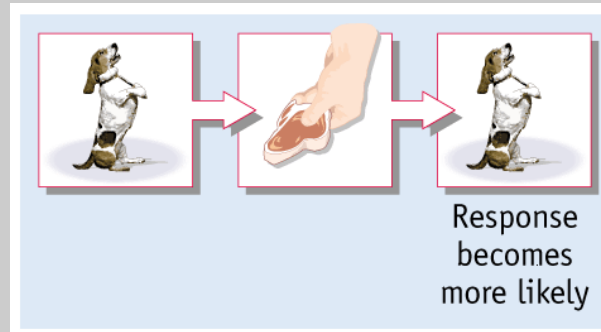
Operant conditioning a type of learning in which the consequences of an organism's behavior determines whether it will be repeated in the future (page 225).

These consequences are called reinforcements and punishments.

Reinforcements

A consequence that follows a behavior that makes that behavior more likely to occur in the future.

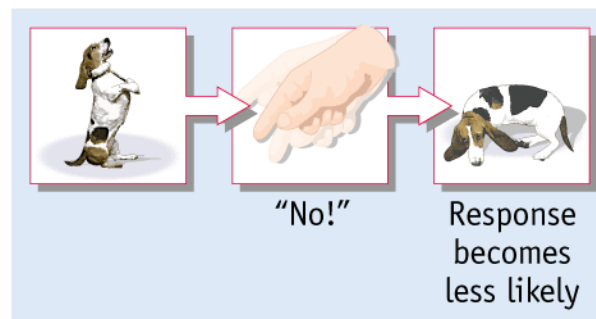
Behaviors that are reinforced are more likely to occur.



Punishments

A consequence that follows a behavior that makes that behavior less likely to occur in the future.

Behaviors that are punished are less likely to occur.



Reinforcements and punishments are defined by the effect they produce.

- Money is not a reinforcement if it doesn't increase behavior.
- Spankings are not punishments if they don't modify behavior (in some cases they are reinforcements because they increase the likelihood of behavior).

POSITIVE REINFORCEMENT

Behavior is followed by a desirable event or state.



\$10 for an A makes it more likely a student will earn more As.

NEGATIVE REINFORCEMENT

Behavior ends an undesirable event or state.



Taking aspirin relieves headaches and makes it more likely that aspirin will be taken in the future.

TWO FORMS OF PUNISHMENT

Behavior is followed by an undesirable event.



A toddler burned by a hot stove will be less likely to touch the stove again.

Behavior ends a desirable event or state.



A boy who loses his TV privileges for pulling his sister's hair will be less likely to pull her hair again.

Descriptions of Reinforcement and Punishment

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

		<i>the CONSEQUENCE</i>	
		Adds (+)	Removes (-)
<u>BEHAVIOR that</u>	Increases	<p><u>Positive reinforcement</u> occurs when a behavior is strengthened by the subsequent addition of a (pleasant) consequence.</p> <p><u>Examples:</u></p> <ul style="list-style-type: none"> • <u>Yelling at a clerk</u> gets them <i>to give you a refund</i> • Giving <i>dog biscuits</i> for <u>doing a trick</u> 	<p><u>Negative reinforcement:</u> A behavior is strengthened by the subsequent removal (or avoidance) of a (unpleasant) consequence.</p> <p><u>Example:</u></p> <ul style="list-style-type: none"> • <u>Smoking</u> to <i>relieve anxiety</i> • <u>Skipping class</u> to <i>avoid a bully</i>
	Decreases	<p><u>Positive punishment (aversive punishment):</u> A behavior is weakened by the subsequent addition of a (aversive) consequence.</p> <p><u>Examples:</u></p> <ul style="list-style-type: none"> • <u>Spanking</u> a dog for <u>getting into the garbage</u> • <u>Scolding</u> a coworker for <u>making a mistake</u> 	<p><u>Negative punishment (punishment by removal or response cost):</u> A behavior is weakened by the subsequent removal of a (desired) consequence.</p> <p><u>Examples:</u></p> <ul style="list-style-type: none"> • <u>Time-out</u>, or the <i>loss of privileges</i> (driver's license, video game, sitting out a hockey game, etc.) for <u>misbehaving</u>

Tao Te Ching (81)

**True words are not beautiful;
Beautiful words are not true.**

**A good man does not argue;
He who argues is not a good man.**

**A wise man has no extensive
knowledge.
He who has extensive knowledge is
not a wise man**

**The more he gives to others, the
more he possess of his own
The Way of the sage is to act, but not
compete**

Tao Te Ching (81)

True words are not beautiful

Behavior	Consequence	Effect on Behavior	
Telling people things that are psychological threatening them or are unpleasant to hear	A person could yell at them, ignore them, fire them, withhold promotions, affection, etc.	It makes it less likely a person is going to tell someone unpleasant news or information	Punishment

Beautiful words are not true

Behavior	Consequence	Effect on Behavior	
Saying what people want to hear	People complement you	You are more likely to say what people want to hear	Positive reinforcement

Using Operant Conditioning to Explain Behavior



Daughter

Behavior:
Screaming tantrum

Consequence:
Receiving a candy bar

Result:
More tantrums in
the future

Mother

Behavior:
Give candy

Consequence:
Screaming tantrum ends

Result:
More candy buying
in the future

Problems with Punishment

Punishments are used by parents, teachers, employers, supervisors, spouses, and kids on the playground ([page 245](#)). Punishments may work in the short-term, but can lead to some negative side effects. Punishments are reinforced by parents (the child stops being unruly), teachers (students talk less in class), employers (employees come to work late less often), etc.

While punishments may be effective in some circumstances, there are problems with punishments—especially physical punishments. These problems include:

- Escape
- Aggression
- Apathy
- Abuse
- And imitation of the punisher

In addition, punishments because of several drawbacks including.

- 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 (also see [achievement motivation](#)).
- The effects of punishments on behavior tend to be temporary.

To effectively use punishments:

- they need to immediately follow the response and (contiguity),
- they need to be applied consistently (contingency).

Problems with Punishment: Escape

The typical response to punishment is to escape or avoid the source of punishment.

- The child tries to struggle free of the parent who is spanking him
- The dog tries to run away for getting spanked
- The failing student skips school
- The employee who has cost the company money “hides out” ([page 246](#)).

In order to avoid or escape punishment, we can “tune out” those who criticize our behavior. To avoid aversive consequences, we can cheat and lie. The student who does not do their homework avoids punishment by copying some else’s work or by saying the dog ate it or the internet was down, the computer crashed, I had to go to my grandparent’s funeral ([page 246](#)). Over time, people are negatively reinforced for these behaviors.

Problems with Punishment: aggression

An alternative to escaping punishment is to attack the punisher.

- We criticize the critic (those with low need for achievement see criticism as a threat, whereas those with high need for achievement see criticism as feedback)
- Dogs bite the hand that swat it
- Adults can hit back

Those who cannot directly attack back may steal, vandalize or subvert those around them.

Aggression may not always be directed back at those around them. People may aggress toward the nearest available target.



Problems with Punishment: apathy

When escape and aggression is not possible, people become apathetic. They do not engage in the world around them. Most behavior is suppressed.

While punishment may suppress an undesired behavior, it may suppress others as well.

Taking the initiative is associated with self-esteem, accomplishments and self-confidence, and achievement motivation. Punishment may suppress these as well.

Problems with Punishment: abuse

The use of punishments, especially corporal punishment may lead to physical abuse by the punisher. While this may not be the intent, punishments may start off as mild, they may slowly increase in intensity.

Problems with Punishment: imitation of the punisher

Those that are punished, tend to imitate those who punished them. When parents rely heavily on punishments for their children, these children may rely heavily on punishments when dealing with siblings, coworkers, and peers.

The science of behavior can determine the effects of punishments and how it can be used effectively. Science cannot tell us whether what can be done should be done ([page 247](#)).

Not all punishments are created equal. There is a difference between hitting a child and taking away the child's television privileges ([page 247](#)).

Alternative Strategies to Positive Punishment

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.

Examples of the Drawbacks of Punishments

1. Getting a ticket for speeding.
2. Getting yelled at for carrying a microscope with one hand.

Other examples:

- 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.

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?

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

For example,

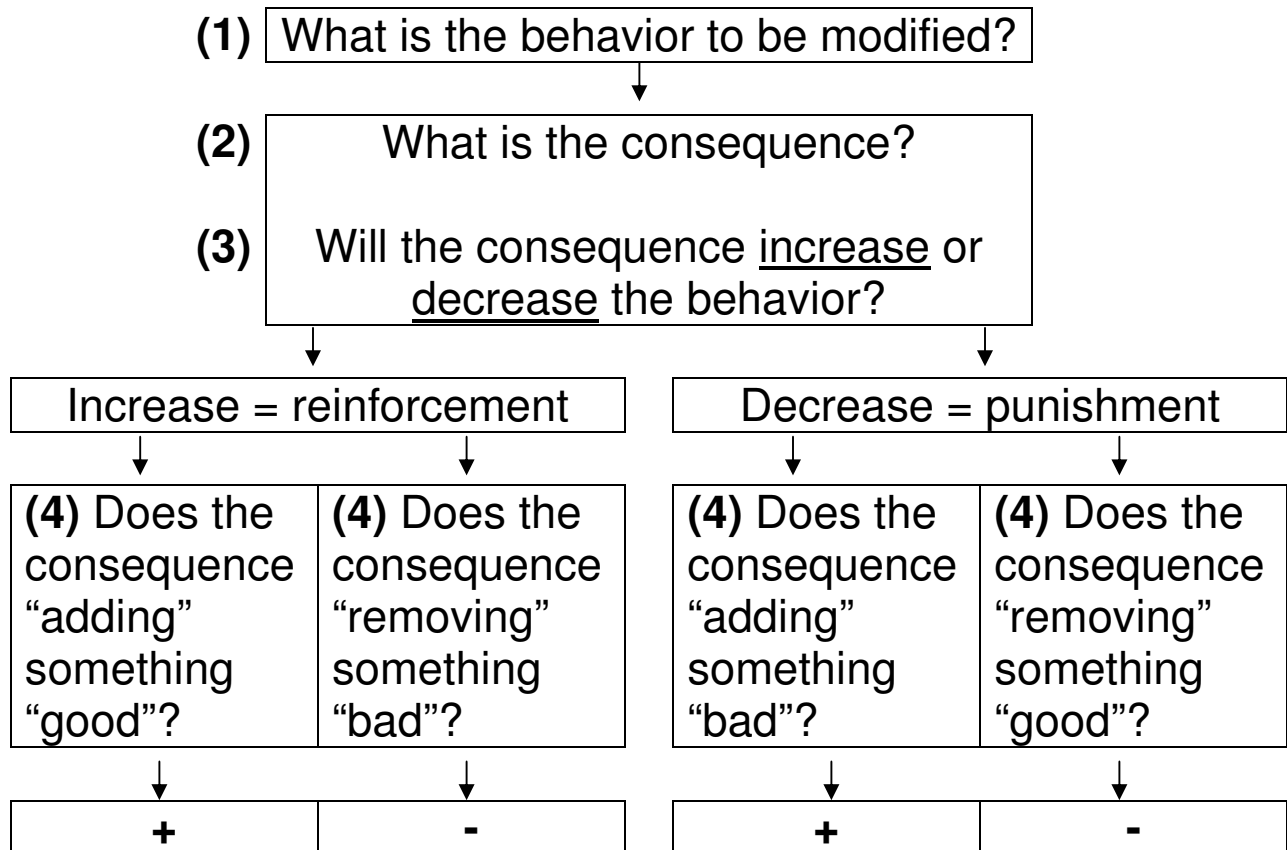
- There was a police program that reinforced people for wearing seatbelts instead of not wearing them.
- There was a program in Eugene that rewarding clerks/stores for carding people, rather than punishing them for selling to minors and not carding.

Identify the following examples as being:

- (a) positively reinforced
 - (b) negatively reinforced
 - (c) positive punished (aversive punishment)
 - (d) negative punished (punishment by removal)
-

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

Ask yourself four questions:



Examples:

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

Behavior	Consequence	Future Behavior
Student turns in their homework on time.	The teacher praises the student	The student increasingly turns in homework on time
Student turns in their homework on time.	The teacher stops criticizing the student	The student increasingly turns in homework on time

- The teacher verbally reprimands a student for interrupting the teacher.
- The teacher takes away recess privileges for interrupting the teacher.

Behavior	Consequence	Future Behavior
The student interrupts the teacher	The teacher verbally reprimands the student	The student stops interrupting the teacher
The student interrupts the teacher	The teacher takes away recess privileges	The student stops interrupting the teacher.