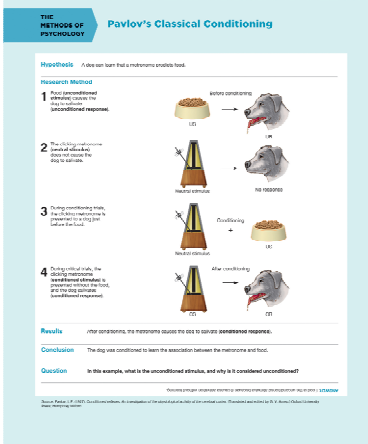




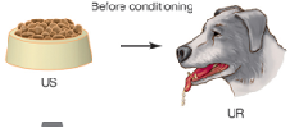
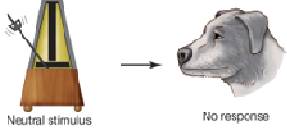


Differences Between Classical and Operant Conditioning


Classical Conditioning	Operant Conditioning
<p>A type of learned response in which a neutral object comes to elicit a response when it is associated with a stimulus that already produces a response.</p>	<p>A learning process in which an action's consequence determines how likely an action is to be performed in the future.</p>
<div style="text-align: center;">  <p>US → UR NS</p> <p>CS → CR</p> </div>	<div style="display: flex; justify-content: space-around;"> <div style="width: 45%;"> <p>POSITIVE REINFORCEMENT Behavior is followed by a desirable event or state.</p>  <p>\$10 for an A makes it more likely a student will earn more As.</p> </div> <div style="width: 45%;"> <p>NEGATIVE REINFORCEMENT Behavior ends an undesirable event or state.</p>  <p>Taking aspirin relieves headaches and makes it more likely that aspirin will be taken in the future.</p> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="width: 45%;"> <p>TWO FORMS OF PUNISHMENT Behavior is followed by an undesirable event.</p>  <p>A toddler burned by a hot stove will be less likely to touch the stove again.</p> </div> <div style="width: 45%;"> <p>TWO FORMS OF PUNISHMENT Behavior ends a desirable event or state.</p>  <p>A boy who loses his TV privileges for pulling his sister's hair will be less likely to pull her hair again.</p> </div> </div>
<p>Classical conditioning usually deals with reflexive or involuntary responses such as physiological or emotional responses.</p>	<p>Operant conditioning usually deals with voluntary behaviors such as active behaviors that operate on the environment.</p>

Classical Conditioning

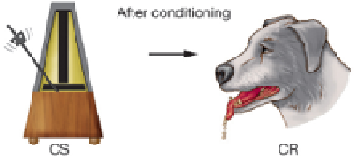
Before Conditioning:

	“examples”	Terminology
 <p>Before conditioning US → UR</p>	Food → salivating	US → UR (sometimes written as UCS → UCR)
 <p>Neutral stimulus → No response</p>	Ticking metronome → no response	Neutral stimulus (NS) → no response

During Conditioning:

	“examples”	Terminology
 <p>Conditioning Neutral stimulus + US</p>	Metronome + food → salivating	NS + US → UR

After Conditioning:

	“examples”	Terminology
 <p>After conditioning CS → CR</p>	metronome → salivating	CS → CR

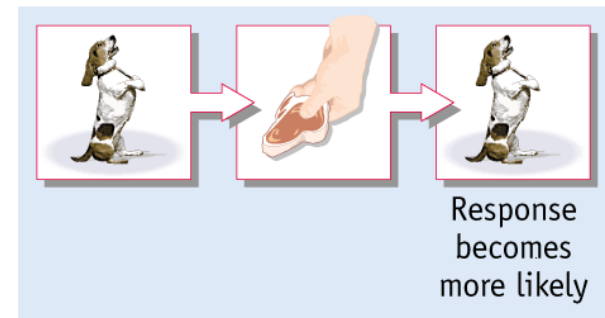
Operant Conditioning

Operant conditioning is the basic learning process that involves changing the probability that a response will be repeated by manipulating the consequences (reinforcements or punishments) of that response.

Reinforcements

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

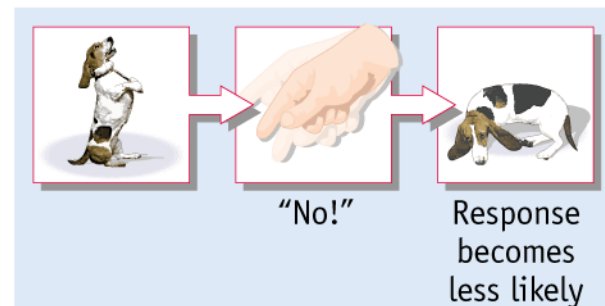
Behaviors that are reinforced are more likely to occur.



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).

Check your understanding of the usual differences between classical conditioning and operant conditioning by indicating the type of conditioning process involved in each of the following examples. In the space on the left, place a

- **C** if the example involves classical conditioning,
- **O** if it involves operant conditioning, or
- **B** if it involves both.
- **N** if not sure

1. Whenever Marcia takes her dog out for a walk, she wears the same old blue windbreaker. Eventually, she notices that her dog becomes very excited whenever she puts on this windbreaker.
2. *The Creatures* are a successful rock band with three hit albums to their credit. They begin their U.S. tour featuring many new, unreleased songs, all of which draw silence from their concert fans. The same fans cheer wildly when *The Creatures* play any of their old hits. Gradually, the band reduces the number of new songs it plays and starts playing more of the old standbys.
3. When Cindy and Mel first fell in love, they listened constantly to *The Creatures'* hit song *Transatlantic Obsession*. Although several years have passed, whenever they hear this song, they experience a warm, romantic feeling.
4. For nearly 20 years Ralph has worked as a machinist in the same factory. His new foreman is never satisfied with his work and criticizes him constantly. After a few weeks of heavy criticism, he experiences anxiety whenever he arrives at work. He starts calling in sick more and more frequently to evade this anxiety.