

Why Do Animals Behave the Way They Do?

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Have you ever wondered why an animal behaves in a certain way? Animals learn about the consequences of their actions and their environment via two basic ways, operant conditioning and classical (or Pavlovian or respondent) conditioning. Understanding operant and classical conditioning can help us to understand why animals behave the way they do as well as help us to train animals to behave in desirable ways.

Operant conditioning occurs when an animal voluntarily modifies its behavior following positive or negative consequences. Reinforcement and punishment are the primary tools used by animal trainers to condition certain behaviors via operant conditioning. When a desired behavior is rewarded by positive reinforcement (usually an attractive food or treat) the rate of the desired behavior increases, while the opposite is true when punishment is administered. Most animal behavior experts concur that animals respond more effectively to operant conditioning when positive reinforcement is used rather than punishment.

Classical conditioning occurs when an animal is presented with a previously neutral stimulus along with a stimulus of significance to elicit a “conditioned,” involuntary response. For example, Ivan Pavlov noticed that dogs quickly learned to salivate when the lab technician who normally fed them entered the room. Pavlov also demonstrated that dogs learned to salivate in response to the sound of a bell (or metronome) after it and a food were paired on a few occasions. In both of these classical conditioning examples, animals learned to associate a previously neutral stimulus (lab tech, bell, metronome) with an imminent food reward.

Both operant and classical conditioning involve learning about associations. However, an important difference between these two modes of learning is that classical conditioning involves an association between two stimuli, while operant conditioning involves learning the association between an animal's behavior and the consequence immediately following the behavior. Another important distinction is that classical conditioning involves modification of an involuntary or reflexive behavior, while operant conditioning involves modification of a voluntary behavior. Both kinds of learning can be shaped by nature or by man.

Animal trainers use both operant and classical conditioning to teach animals to behave in certain ways. For example, dog trainers often use treats to operantly instruct their dogs to sit, stay, come, etc. If the dog performs appropriately they are given a treat immediately following the desired behavior. With enough repetitions, dogs learn to associate appropriate behaviors with the positive consequences of receiving the treat. If an animal behaves inappropriately, it does



not receive the treat and the inappropriate behavior will decline. Some animal trainers (especially marine animal trainers) use a “clicker” or a whistle to signal that a reward is forthcoming. Marine animal trainers use these tools because it is more difficult to reward a marine animal immediately after it performs a trick. Marine animals are first trained to associate the sound of the previously neutral clicker or whistle with a treat (i.e., learning the association between two stimuli – sound, then food, via classical conditioning). Then, when a desirable behavior occurs, the animal first hears the sound signifying that it has performed appropriately, and soon after receives the treat (i.e., learning the association between an appropriate behavior and its consequence via operant conditioning). Perhaps you have observed marine animal trainers using clickers or whistles to train whales, dolphins, and seals to do some amazing, sophisticated tricks using a combination of operant and classical conditioning. If you have ever watched a dog show, you have witnessed the principles and power of animal training and behavior.

Below are some examples of animal and human learning that you may have observed in your everyday life. Ask yourself the question, is this an example of operant or classical conditioning? Or both? Can you think of other examples?

- Birds learn the locations of feeders and other food sources.
- Livestock learn to come to a truck to be fed or to move to a new pasture at the sound of a horn.
- Livestock learn to avoid areas surrounded by an electric fence.

- Cats come running to the sound of a can opener.
- Children work hard to earn good grades in anticipation of a reward (or to avoid punishment!).
- Animals learn to form preferences or aversions by associating the taste of a food with its post-ingestive feedback.
- You try new food at a restaurant that causes food poisoning. The next time you smell the food, you feel nauseous.
- The smell of fresh baked bread makes your mouth water.
- You get paid for working.
- Child gets a dessert for eating her vegetables or ice cream for begging incessantly.
- Dog gets attention from people when he barks.
- Toddler gets picked up and comforted for screaming.
- Man hits a \$20 “jackpot” and puts \$100 more in the slot machine.
- Nurse says “Now this won’t hurt a bit” just before giving you a shot. The next time you hear “This won’t hurt” you recoil.

In some of these examples you may have noticed that we sometimes unwittingly train unwanted behavior in our animals, our children, and even ourselves. It is important to keep in mind that for both operant and classical conditioning, behavior is a function of its consequences. When positive (negative) consequences follow a certain behavior, that behavior typically increases (decreases). To learn more about animal behavior as it pertains to wild and domesticated grazing animals check out <http://behave.net>.

Practice Being a Good Neighbor

take responsibility to maintain the quality of life you and your neighbors desire

- ★ Establish good neighbor relationships. Practice citizenship, contribute to the community and respect neighboring properties and the rights of others.
- ★ Respect trespassing laws and inform children about safety issues. Many times neighboring properties are inviting playgrounds full of potential risks, i.e. equipment, ponds, large animals, rough terrain.
- ★ Assume responsibility for sustaining land, water and environmental quality. Attend educational programs and use resources of Cooperative Extension, your Natural Resource Conservation District, the Game and Fish Department and other available resources.
- ★ Determine impact to others when you make decisions regarding your property. Examples include planting trees that eventually grow into power lines or clearing land that accelerates erosion.
- ★ Understand ownership responsibilities for pets, horses and other livestock. Loose animals cause safety concerns and overgrazing of your land can bring negative impact to adjoining property.
- ★ Don’t assume that complete freedom exists in the countryside. Shooting firearms, various commercial activities, outdoor collections of vehicles and equipment often are viewed as nuisances distracting from the neighborhood.
- ★ Acknowledge that expectations for snow removal on public roadways, emergency rescue, fire and law enforcement protection are much different in a country setting. Response times usually are longer due to distance, road conditions, etc.
- ★ Being a good neighbor means being responsible, courteous and respectful of others.

Adapted from: A Place in the Country: The Acreage Owner’s Guide <http://lancaster.unl.edu/acreageguide/response.shtml>