

How Dogs Learn – Operant Conditioning



You may be asking “Why do I need to know about Operant Conditioning when what I really need to know is how to get my dog to sit or stay or walk on a lead without pulling. In reality, knowing how to use the “Laws of Learning” to your advantage will make all the training you do much, much easier. If you are using clicker training, you are using Operant Conditioning, even though you may not fully understand WHY it works.

Consequences

Dogs (and anything with a brain, for that matter) learn based on the consequences of their actions. They learn early on that if they bite mom too hard, mom will bite back. They learn that chewing on bones feels and tastes good and that chewing on their brother can be dangerous. All actions have consequences and those consequences affect future behavior. There are three kinds of things that happen in life: Good, Neutral and Bad.

Good consequences will cause behavior to be repeated. For example: When you eat at a good restaurant, you are likely to go back. If your dog finds tasty morsels in the trashcan, he’s likely to look in the trash again in the future. If you go somewhere and the service is horrible, you may try going back once more, but if service is bad again, you probably won’t return. When a puppy tastes something awful, he may try it again, but rarely a third time. There are few truly neutral events. Neutral events have neither a positive or negative affect on future behavior.

Control

If you control the consequences, you control behavior. You have more control over the good stuff and bad stuff than you might think. You just aren’t aware of what the good stuff and bad stuff are on a conscious level and you may even be using them inadvertently in ways that create exactly the opposite behavior from what you really want, as well as also missing good training opportunities. You might even feel your dog is controlling you! This is because the same laws and principles govern your behavior. You want good stuff to start and bad stuff to end. You also want to avoid ending the good stuff and avoid starting the bad stuff.

Rewards = Repetition

Your actions in response to your dog’s behavior can create situations where the dog IS controlling your actions. The dog learns what works. If, when he drops a ball in your lap, you throw it, the ball in the lap behavior will be repeated. If he scratches at the back door and you let him out to chase squirrels (even if YOU think you are letting him out to potty), the scratching behavior will be repeated. If you are doing something the dog doesn’t like, such as clipping his nails, and you stop when he makes a fuss, guess what, his fussing will be repeated because the prior ‘reward’ for that behavior was an end to something the dog perceived as bad. Now, we just have to look at how we can turn this thing around to benefit us!

Reward Acquisition

You have (or should have) control of your dog’s access to everything he wants in life: food, the outside world, attention, other dogs, smells on the ground and play opportunities. You can make toys come to life by throwing them or playing tug. You have opposable thumbs that open doors and food packaging. Most people don’t make good use of these abilities.

Some people have it backwards. They think that because they provide all this good stuff, the dog should be obedient in return. But it only works if the dog has to hold up his end of the bargain first. You must make it appear to the dog that, if he wants dinner or the front door to open, or a walk to continue, he must do obedience first. The dog will see obedience as a way to get what he wants, rather than something that is interfering with his enjoyment of life.

Selective Rewards

It's been called the "No free lunch" program, or "nothing in life is free" and whether you use this to your advantage or not, keep in mind: You are always rewarding something when you open doors, put down his dinner bowl, start a play session or go for a walk. All you are going to do now, is become aware of the process and select a behavior to reward, rather than simply rewarding whatever the dog happens to be doing when he realizes the good thing is going to happen. You must, however, be prepared to withhold the reward if the dog doesn't comply. Otherwise, the dog has no motivation to comply. If you are going to let him out regardless of whether he sits or not, why should he sit?

Generalizing

Humans learn to recognize situations and contexts in which a given consequence is likely to happen (either good consequence or bad) and can easily generalize those consequences to other places where those situations are present. Dogs also learn to recognize various situations, but may take a bit longer to understand the generalizations.

Environmental cues let you know when a behavior is likely to be successful (or not). Putting money into a drink machine usually gets you a drink, putting money in a mail slot doesn't. Putting money into a slot machine usually gets you nothing, but occasionally gets you something and on rare occasions, gets you something REALLY good. So... humans put money into drink machines, don't put money in mail slots and get addicted to slot machines.

Your ability to recognize a drink machine regardless of whether it is indoors, outside or has a different shape or picture on it allows you to 'generalize' the coin inserting behavior to various places so that you can get a drink. Your ability to discriminate between a drink machine and a mail slot enables you to be successful with your coin inserting behavior.



Behavior + Reinforcement = Repetition of Behavior

Being "successful" in animal learning terms means that the behavior was reinforced. This means either something good happened, or something bad ended. Behaviors that are reinforced get stronger and will be repeated. This is a law that applies to all living/breathing things. It is the essence of training, so memorize it. All that you have to do is to let the dog know what actions will be reinforced and how to predict a strong likelihood of that reinforcement. We do this with cues.

Cues = greater chance of reinforcement

An important thing to understand is that the dog is not working this out logically in his head: "Hey, maybe if I do this, that will happen". The dog just does what works and stops doing whatever isn't working.

No Reward = No Behavior

Dog behavior is like a never-ending experiment. When a behavior dies from lack of reinforcement, it's called extinction. Most extinctions happen so fast, owners aren't even aware that it happened. If a dog rushes up to a mailbox and it doesn't flee, the behavior wasn't rewarded, and the dog isn't likely to rush up to another mailbox to get it to run. If the dog stares at the fridge and nothing happens, he's likely to move on to another behavior (Some dogs, Golden Retrievers in particular, may take a bit longer to figure this out 😊 They seem to believe that if they stare at something long enough, it will work for them).

Extinction Burst

No animal would survive if it wasted time repeating dead-end behaviors. However, if a behavior has been getting a reward, and it stops being rewarded, the behavior will get stronger before it dies. This is known as an "extinction burst".

Think of what happens when you put money into a drink machine, you make your selection and nothing happens. Putting money in the machine has always worked in the past, so you push the button harder, then you push it several times. You may even try putting more money in the machine, before you finally move on to the water fountain.

What you were experiencing was an "extinction burst". If your dog has a behavior that it's been doing, and you want the behavior to stop. You need to be aware of a few things.

- First, the fact that the behavior was repeated, means that it was reinforced in some way.
- Second, if you don't remove the reinforcement the behavior will continue. And third, the behavior will get worse before it gets better because of the extinction burst.

The "Desire To Please" Myth



A common fallacy people have about dogs is that they have a "desire to please" us. Some people think that our love and praise is all a dog needs as a motivator. Your dog doesn't have a desire to please you; he only has a desire to please himself. If making you happy brings good things to him, I guess this could be construed as a desire to please, but most dogs aren't willing to work for just praise, when there are other things in the environment that are higher on the reward scale.

Praise

If your dog seems to be responding to praise only while learning a behavior, then there is also likely the desire to avoid a punishment too. Praise is, however, a good way to let a dog know he's on the right track to getting a reward. If you think your dog will be obedient just because it makes you happy, you need to accept the fact that your dog doesn't think you are God and instead, love your dog for the thinking being that he is.

Your training will be much more pleasant for your dog and much more rewarding for you, if you use the known laws of learning to your advantage. Using these laws, you can get your dog to willingly and happily do the things you ask without the need for the threat or use of a punishment. Instead, they will be doing things because you might give them a reward.

Hard Wired or Acquired

Another thing that it helps to understand is that dogs have different types of behavior. Some is "hard wired" and some is installed or acquired.

Hard wired behaviors require almost no learning to be carried out to their fullest and can be stronger in some breeds than in others. Dogs chase moving objects, distress vocalize when alone, go for any available food, compulsively greet novel people and dogs, protect what they feel is theirs, pee away from their sleeping area, etc. etc.

The rest of their behaviors are the product of contingencies in the environment. Owners have nearly total control of their dog's environments: where they live and sleep, if and when they may go outside, what limited pockets of the universe they may visit, when and where they eat, even if they live or die. Anyone who feels controlled by his or her dog needs to understand this. You have total control; you just haven't demonstrated it to the dog.

It just so happens, that most of the behaviors we don't want, come hard wired and we must counter condition, finesse, or redirect things like digging, distress vocalizing, chewing, eating whatever is in reach, chasing, and rough play. Also, most of the behaviors we DO want don't come with the package. Sit, Down, Stay, Come and Heel, on command, from the perspective of these social predators, are useless, silly and irrelevant behaviors. Unless, you make it worth their while!

Motivation

To make a dog want to do something, you need motivation. Think of some things that your dog wants in life (examples could be: attention from humans, food, access to outside, other dogs, and squirrels). All these things can be used as motivators (some you may need to be more creative with than others).



Imaginary Scale of Importance

All of these things also fall into an imaginary scale of importance. Chasing squirrels is much higher on the scale of motivators for most terriers than food, and the food is higher on the scale than getting a belly rub.

Also be aware that punishments have a scale of importance. If your dog finds a yummy morsel in the trash, and you yell at him, grab him by the collar and put him out of the room, it's likely that he **will** look in the trash in the future. This is because the reward is stronger than the punishment. Also, the reward happened first and can't be "taken away" by use of a punishment. Behaviors that are rewarded will be repeated.

If instead, you caught the dog starting to lift the lid of the trashcan and he received the same punishment, the punishment would have a greater effect, provided the dog had never gotten any reward from the trash in the past. Food can be a great motivator and the easiest solution for trashcan trashing is to keep the can out of reach or to not put anything in the can that has food on/in it. I put any trash that smells like food, in a bin in my freezer. So, my dogs don't look in the trashcan at home.

However, when my dog is at the training center, he does look in the trashcans, because he's found tasty treat wrappers in there in the past. So, the only way to stop the behavior is to be sure it's not rewarded (move the trash out of reach or more closely supervise the dog). Punishment for trash surfing and other behaviors where the dog can reward himself will only cause fear of you. It teaches the dog that it's not safe to do that rewarding behavior *while you are present*. If you or the punishment are not there, the behavior will continue.

O.K., we understand motivators, what they are and why they work. Now, we need two things in this order:

- 1) a way to communicate to the dog how he's doing in his quest to get the motivator and
- 2) names for all the different things the dog has to do (also known as cues).

Dogs Learn in Spite of Our Miscommunications

In traditional training, it is done absolutely backwards and dogs show tremendous skill in learning in spite of all the miscommunication. First, the behavior is named, but the dog has no idea what the word means. It would be like someone telling us to do something in a foreign language that we don't understand.

Then the dog is moved around into various positions that have no meaning for him and he has no motivation to stay there or repeat that position yet. The owner gives him praise and a pat on the head for what the owner believes is the sit, but the dog happens to be watching the activities in the near-by class when he gets rewarded.

After a few manipulations of his body by the owner, the dog is expected to perform this behavior on his own, and gets a "correction" (meaning a bad thing) if he gets it wrong or does nothing. Eventually, the dog will learn how to get a reinforcement (avoiding the bad thing) and will make a connection to the word that is used for the behavior. If you were the dog, would you want to learn new things?

When the dog is told to sit, he first has to process what the word means to him (if anything) and then, if he understands the cue, he works out the odds that complying with the cue will be beneficial to him. Dogs are most likely not working these things out in their heads, but they do behave as though they were.

Sit = Click

Let's look at another dog being trained to sit. The dog is with the owner, in training class or at home. He saw the owner pick up a bag of treats and she's holding that clicker thing. This 'picture' has been known to bring good things to the dog in the past. So already the dog is somewhat motivated because of the higher likelihood of good things.



Now, the owner is looking at him, just looking and giving the dog's brain a chance to work. No human chatter that the dog has to process to pick out what words he knows. The dog sniffs the ground, that gets nothing, the dog takes a step forward, that gets nothing, the dog sits - BINGO! The dog hears that sound that he learned means good things are on the way.

Sit = Click = Reinforcement = Repetition

Now all he has to do is figure out what caused the click (and good things). He tries some behaviors and finds the sit causes the click again. So, he's figured out that sit is causing the click! Now he sits as fast and as often as he can because the more he sits, the more good things he gets. A reward history is being created.

Cue = Sit = Click = Reinforcement = Repetition

Now, the human says something right before the dog sits. The first few times, the dog may not pay attention to it, but soon he realizes that the word is heard right before he sits each time and sit is bringing him good things. The word begins to predict the behavior that's getting him the treats. If he hears the word and lies down, it doesn't work. If he hears the word and

stands, it doesn't work. But, when he hears the word and sits, Bingo! The word becomes associated with the known behavior and becomes a cue for a specific behavior.

Cue = Greater Chance of Reinforcement

All known cues then let the dog know that if he does what the cue suggests, good things are likely happen. By using this sequence, it is easy for the dog to learn and make the connection between the cue and the behavior.

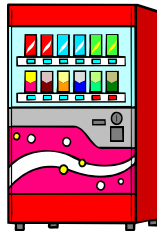
Shaping Behaviors From Simple to Complex

For some of the more complex behaviors, you will need to break the behavior into easier steps the dog can understand (known as *shaping* a behavior). If you are trying to get the dog to do something he won't offer on his own, you may have to find a way to help the dog perform it at first so that the behavior can be associated with a reward.

Positive Consequence = Repeated Behavior

No Positive Consequence = No Behavior

I'll say it again; dogs will do what brings them good things and **avoid doing** what brings bad things. This is operant conditioning in a nutshell. Whenever you want to teach your dog to do something, simply look at how you can get the dog to offer the behavior so you can click to let him know that the behavior is rewarding. Once the dog is doing the behavior in a way that you can anticipate, start to add a cue just before the dog does the desired behavior. Using these principles, you can teach the dog anything he is physically able to do!



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