A Learning Theory Primer

by Susan Smith, CPDT-KA, CDBC

How to Use Positive Reinforcement to Reduce Undesired Behaviors

We've been through most of the learning principles that directly affect us as animal trainers. So, what's the point? Why do we care?

Well, I believe that if we understand the concepts, we actually have the most versatile toolbox available. Certainly, we hear criticism from trainers who still use primarily aversive training methods (choke, prong, and e-collars) that positive reinforcement trainers are limited in what they can do. I would strongly disagree with that statement! In fact, trainers who follow pack theory principles and/or aversive-based training methods are the ones that are limiting their toolboxes, in my opinion.

Now, having said that, if a trainer using primarily aversive methods understands learning concepts, they will also have a very versatile toolbox. Methodology is a philosophical choice—understanding learning and behavior is providing yourself with a fully stocked toollbox. Hopefully, once a trainer understands the concepts, they will tend toward more positive methods, because they understand how powerful they can be, but it is still a choice. We've talked about the humane hierarchy, and hopefully some day that concept will be widely understood and used by animal trainers. Nevertheless, methodology is a choice.

I've given examples throughout this series on how each principle can affect the animals we train, and how we respond to their behavior, when we recognize the principle that is in play. In this article, I'd like to give you some ideas on how you can use positive methods more effectively.

Probably the hardest problem we face as pet dog trainers is reducing unwanted behaviors without using aversive methods. For those who are not well-versed in learning concepts, this is a very difficult procedure. However, there are ways to do it. Of course, we're not really reducing behavior, because that would be punishment. What we're doing is replacing the undesired behavior with an acceptable behavior.

The most effect way to replace a behavior is through the differential reinforcement schedules. The most commonly used in our job are differential reinforcement: of an alternative behavior (DRA), of an incompatible behavior (DRI), and of an other behavior (DRO). Which differential schedule you use will depend on the behavior you are trying to reduce.

So, instead of focusing on the undesired behavior, we focus on what we want the dog to do instead—and that's how we're able to use positive reinforcement to reduce behavior! Our focus is actually on increasing a behavior, but by doing that we are also decreasing the undesired behavior because something else has taken its place.

There's no doubt that it is very easy to train a new behavior with positive methods. When we have an undesired behavior, we must first pinpoint what function that behavior serves. Here are some common examples (there may be other reasons for these behaviors, as well; I've chosen common functions):

Undesired Behavior	Function of Undesired Behavior	Replacement Behavior
Counter Surfing	Food gathering	Floor surfing
Watchdog Barking	Alerting others to presence of potential danger	Coming to owner, sitting and barking once
Pawing at Owner	Attention (of some kind – it can vary)	Coming to owner, sitting and touching owner with nose

These are all common behaviors with a real function for the animal. If we provide them with a way to fulfill that function and reinforce the new behavior, they will be satisfied.

Sometimes it isn't as easy to determine the function of a behavior as it is with these examples. It's our job to assess the behavior and come up with an alternative behavior that serves the same function. We must come up with that alternative—it is very difficult for the animal to simply leave a void where there used to be a functional behavior. In fact, when that happens, usually punishment has been involved.

There are some other concepts that will help when reducing undesired behavior, as well. One is called the matching law and another is called fair pairs.

In a nutshell, the matching law essentially means that given two behaviors that are being reinforced, the animal will pick the behavior which has a richer reinforcement schedule. We can use this to get the animal to start doing an alternative behavior; the more he's reinforced for the alternative behavior, and the less he's reinforced for the undesired behavior, the more likely he'll opt for the reinforced behavior. So, if we extinguish the original behavior and put the alternate behavior on a variable reinforcement schedule, voila! We now have an animal that is more likely to do the alternate behavior.

Fair pairs is a concept that comes from working with children. The idea behind it is that if you take something away, you must replace it with something of equal or greater value. This way, the animal is not being punished by something being removed, but is being reinforced for allowing us to take that item away. We already do this to some extent when we do exchanges. However, we need to be a bit more creative (especially with our owners), and make sure that the animal is being reinforced for that behavior.

If the animal will work to avoid something, then it is an aversive. So, P-, P+ and R- are all aversives – and there is even some debate that extinction could qualify as an aversive. Of course, we use aversives all the time, but with just a little effort we can eliminate them from formal training, if we want.

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