

Timing is Everything

By Deborah Palman

The basic principles of training dogs are very simple. If you reward or positively reinforce the behaviors you want the dog to display, the frequency of these behaviors will increase. If you don't reinforce or discourage the behaviors you don't want, the frequency of these behaviors will decrease. Unfortunately, often the practical application of these principles in training dogs to do complex behaviors is difficult.

First of all, you need to train a dog that is "reinforceable" or values something that you can provide. Therefore, the easiest dogs to train are those that value food, play, social contact, or the satisfaction of other innate "drives" like hunt drive, prey drive, etc. through activity with their handler. If a dog does not value the reinforcers a person can offer, then they become very difficult to train for working applications because the only way to change the dog's behavior is through force. While force can control behavior, it usually does not suffice to create the kind of behaviors we would like in our working dogs, behaviors that require the dog to work away from us in a hunting mode, like searching for human scent, narcotics, etc., or pursuing and catching criminals. These objectives can really only be created by having a reward that can be given to the dog to encourage the desired behaviors.

Assuming that we are working with dogs that value food, toys, play, catching prey and social contact, training can progress by reinforcing behaviors that are desired. Positive reinforcement is used in its purist form by the "Click and Treat" training system. In the "Click and Treat" system, the sound of a clicker is used to signal that the reward will be given. The clicking sound is given meaning to the dog by starting the training by clicking the clicker and giving the dog a food treat (or play with a toy or any other thing the dog values) each time the clicker is clicked. Thus the dog associates the clicker (conditioned positive reinforcer) with the reward (primary positive reinforcer). In its purest form, the "Click and Treat" system would teach a dog to sit by observing the dog until it sat, then clicking and giving a treat each time the dog sat. Dogs will catch on to this very quickly and sit more and more. When the dog is sitting and expecting

a reward, the trainer will start adding the word "sit" to the exercise. Previous to this, no commands or words were used. Soon the dog associates the word sit with the action and the following reward, so it repeats the sit position again and again.

Dogs trained with this system or a similar system become fascinated with the game of trying to figure out how to get the rewards and become quite flexible and inventive in their behaviors. Depending somewhat on the skill of the trainer, the dog can be made quite reliable in responding to commands if it values the reinforcement more than other activities they may engage in.

A Training Example

A training example of positive reinforcement being used would be in the training of detector dogs. The typical, traditional detector dog program uses a toy or towel as a reward. The dog is first imprinted on a scent and made to want to find the scent by associating the scent with something good. For example, if a clean, rolled towel is used as a reward, the first few towels the dog plays with and looks for in easy situations are impregnated with the target scent. The dog and handler play with these towels, hide them, the handler throws them in long grass, etc., until the dog is eagerly seeking out the scented towels. The towels may be hidden and then, when the dog shows a desire to find them and get them out of the hiding place, the dog may be rewarded with another, clean, unscented towel. Training then progresses to hiding the actual target scents instead of the towels and a clean towel used for reward. In this case the reward or primary positive reinforcer is the towel the dog gets to play with.

Dogs are always looking for ways to get their rewards quicker. They are also very conscious of what their handlers are doing and all their motions and body language. Dogs communicate primarily with each other using body language. We tend to be more conscious of what we say to each other (and our dogs) rather than what body language we are using at the time, but you can bet the dogs see everything we do in detail. If you watch dogs, they communicate what they want all the time. If they want something, they look at it. They orient their body towards it, move towards it and they jump for it, etc. If they want to avoid something, they will look away, move away, and lean back. If they have a good bond and relationship with their handler, they will be aware of what the handler is looking at, where the handler is facing and what the handler is doing all the time.

In detector dog training, handlers often make the mistake of thinking that the dog interprets the "reward" signal as being the moment the dog gets to chase the towel. So the handler tries to throw the dog the towel the exact moment the dog is doing what he wants, like digging at the target scent. This works fine as long as the dog stays perfectly focused on the target scent and never looks at his handler. However, as the hides get harder and the location of scent more obscure for the handler and dog, the dog sometimes gets confused and starts watching the handler for any cues of what might be the behavior that earns the towel. The dog is usually a step ahead of the handler and will interpret the handler's hand moving towards the towel as the signal that the dog has done what the handler wants. As the dog starts to move into the scent cone and the handler knows an indication is coming, the handler may reach towards the towel to get ready to reward. If the dog sees this, he may stop his action and look at the handler before he fully indicates because the dog has associated the reaching for the towel as the reward signal. If the handler now rewards, he is rewarding the dog for looking at the handler. This sometimes sets up the handler now re-commanding the dog to search, the dog continuing, etc.

Some trainers solve this problem by having another person reward the dog. This is a good solution, but a better solution is to create a proper "reward signal" or secondary positive reinforcer like the click in "Click and Treat."

Some good handlers and trainers may not consciously have a "reward signal" like the words "good dog" or whatever, but their use of commands, language, praise and body language is so consistent that the dog learns what motions and words precede the reward and learns to read them, so these handlers are successful without having a set signal. But it is better to understand how a secondary reinforcer works and utilize it consciously so that the exact behavior the handler wants is the one that is reinforced.

In detector dog training, the secondary positive reinforcer, which may be a click or may be the words "good dog," is given the instant the dog does what the handler wants. The secondary positive reinforcer is trained by using the signal and then throwing the towel again and again, so the dog knows the towel comes when the signal is given.

The use of the secondary positive reinforcer eliminates the need to have pinpoint accuracy in the delivery of the reward. Once the dog knows the signal, the reward can be a little delayed (like when the handler has to pry the toy out of his pocket) and the dog will still understand what is being rewarded for. Thus the problem of the dog

watching for the hand reaching for the towel can be eliminated with the use of the secondary reinforcer.

For obedience and competitions, the reward can be really delayed by having it off the field. After the completion of a routine or training exercise, the handler can give the signal and then run to the reward off the field. The dog can learn that the reward may not be with the handler, but it can be nearby and still available on the signal. In competition, the handler just never gives the signal until the competition is complete and the team allowed to leave.

Used in this way, the secondary positive reinforcer "ends" the exercise and the dog is free or released to gain the reward. This is an important point because the handler or trainer must carefully time the reward signal to make sure the dog has completed what they want. If they use the signal too soon, the dog is free, must be rewarded and the exercise started all over again to accomplish what the handler needed.

Negative Secondary Reinforcers

Some trainers will add another word to the dog's communication repertoire. This word means "wrong choice" or what you just did will not be rewarded. This allows the dog to learn what is not right as well as what is right and speeds up training. It is important that this word not produce a feeling of impending punishment or too much negative so that it makes the dog stressed or shuts the dog down. This is why many handlers will use "wrong" instead of the word "no" that might have been used previously in the dog's life and associated with physical punishment.

The signal "wrong" can be taught every time the dog fails to do something the handler wants. For example, the handler is playing with the dog and has the toy. The dog knows the command "sit." The handler gets ready to throw the toy and asks the dog to "sit." The dog doesn't sit because it is too excited. The handler then tells the dog "wrong" and puts the toy in his pocket and turns his back on the dog for a short period. The exercise can be repeated until the dog sits, when the handler should say "good dog" and throw the toy for the dog. Handlers can think of plenty of other situations where they can reinforce these secondary negative reinforcers when the dog wants something like to eat supper, to go outside, to get in the car, whatever. The wrong behavior earns the word "wrong" and a delay or removal of the reinforcer, and the right behavior earns the word "good" and the reward.

With tough dogs, some trainers recognize that the word “wrong” needs to be associated with some degree of punishment because some dogs can be very tough psychologically and physically and need more discouragement to stop some behaviors than the simple information that they lost out on a chance to get a reward. This is very common in apprehension work where biting, fighting and chasing are very rewarding to a dog of good working character.

I have a dog that loves bite work and is often hard to teach because he would rather fight than obey, even though he is reasonably obedient in other situations. Like many tough working dogs however, physical pain and punishment can cause him to bite and fight harder with the decoy rather than obey or even learn how to obey commands. To make things even worse, restraint and restriction with leads and collars tends to make my dog more hectic and frustrated with the training situation. For this reason and for the dog’s safety, I moved to using an electric collar to train because it didn’t involve restraint and didn’t pose a safety problem with leashes that could become tangled and stepped on, endangering the dog.

There are some dogs that are so tough that an electric collar doesn’t affect them. Fortunately my dog is not that tough, but it was still frustrating to train at times because it seemed like he wouldn’t learn things, often acting as if he never heard the command. At the time, I was not consistently using a signal that meant “wrong,” often because this dog was so fast that I barely had time to push the button on the collar, much less say “no” after he did something wrong.

I like to train with a number of different trainers, always seeking new ideas. One person I always learn a great deal from is Ivan Balabanov. Ivan uses secondary reinforcers to communicate with his dogs and even goes to a third level, using a command that means “what you are doing is good, continue working.” During this period when I was struggling with apprehension work, I was able to train with Ivan for one session. His suggestion for the apprehension work was to use a secondary negative reinforcer, in my case, the word “no.”

At first, I found this hard to do because I had trained myself to push the button first and try to explain afterwards because things tended to happen fast. But when I did use the word “no” instead of an immediate shock, the effect was interesting. About half the time, my dog would stop what he was doing and try to do what he thought was right. Sometimes it became clear that he didn’t know what was right and sometimes it was clear that he just wasn’t going to obey. When I did have to use the collar to remind him to pay attention, the communication was much clearer. I could see that by just punishing him with the shock instead of verbally communicating what behaviors were wrong, I was not always teaching him what was wrong. Being

punished "out of the blue" as such didn't help him to learn any. Even when he was being disobedient, saying "no" to communicate to him that I didn't like what he was doing gave him time to think about the situation, even if punishment did follow. His bite work and our communication have been much better since I started using "no."

Better Communication

Humans tend to rely on verbal communication while dogs rely on non-verbal body language. Thus dogs will always read their handlers' non-verbal cues before they pay attention to the verbal. This can cause major problems in training and communication between the two. If handlers teach their dogs verbal secondary positive and negative reinforcers, the communication of what the handler wants and what earns the dog his reward will be greatly enhanced and training will be more efficient.

As police K-9 handlers and trainers, we work with dogs that eagerly seek rewards or positive reinforcers. We can take great advantage of this aspect of training by helping to guide the dog to the reward through better communication rather than relying on force or punishment to train behaviors.