



## Applied Behavior Analysis: Teaching the Horse in a Sustainable and Ethical Manner

by Kate Southcombe

Truck loading and unloading can be taught or re-trained progressively using positive reinforcement, commonly used in Applied Behavior Analysis.



The purpose behind many of our teaching or training methods today is often forgotten as the principles get pushed aside in favour of the latest gimmicks and easy-to-follow, quick-fix methods that frequently leave us feeling like we're missing something. When we begin to focus solely on the method, we run into trouble when the method fails to deliver. How often have we seen people blaming techniques when it is the *application* of the techniques that is to blame?

We *are* missing something and it's the scientific principles of behavior behind the techniques. Once we understand these principles we are able to train more effectively. Our training becomes sustainable because we are able to go back to the principles if a method is not working for a particular horse. From an ethical point of view we are then able to apply the most appropriate, un-intrusive methods, empowering

both the horse and the trainer.

### The Principles of Behavior *The Law of Effect*

One hundred years of science has revealed that there are general principles of learning that apply to all species of animals. The most fundamental principle, *the law of effect*, states: Behavior is a function of its consequences. In other words, animals behave today based on the outcomes their behavior produced yesterday. Simply, animals do more of what works to produce valued outcomes and they change the behaviors that don't work for them. Our job as trainers is to redesign the *environment* to make the desired behavior easier and more rewarding than the undesired behavior.<sup>1</sup>

To understand behavior, we can look at its 3 stages: A) conditions that occur before the behavior and signal, or set the occasion for the animal to behave in certain ways; B)

the behavior itself, and C) the consequence the behavior produces that gives the behavior function (purpose). These are the ABCs of behavior.

For example, A: When I approach horse; B: the horse walks towards me; C: then I give horse an apple.

*Environment:* By looking at behavior in this way, we are able to see how A and C (the environment) influence behavior from both sides of the equation: *before* and *after* the behavior occurs.

*Behavior:* From this simple example we can predict quite accurately that the horse will walk towards me more readily, when I approach in the future, to get an apple. Why? Because previously this behavior was positively reinforced. Behavior occurs in context and is never independent of the context in which it occurs.<sup>1</sup>

All animals behave for a reason, such as to get something of value or escape/ avoid something aversive. We all generally behave for an effect, an outcome. The trainer's goal is to be able to identify potential ways to increase a desired behavior and reduce an unwanted behavior. This can be done by managing outcomes and teaching new behaviors in ways that are un-intrusive and empowering for the individual - that is, in ways that leave as much control in the learner's court as possible.

#### Negative and Positive Reinforcement

The principle of reinforcement states that if a behavior is immediately reinforced, it is more likely to be repeated in a similar situation. Traditionally, horses are trained using negative reinforcement. Even natural horsemanship methods still rely on negative reinforcement. The terms *negative reinforcement* and *positive reinforcement* often confuse people. They are not about being aggressive or nice to your horse. The words 'negative' and 'positive' in the context of training are used in the mathematical sense - removing (negative) or adding (positive) something after the behavior occurs in order to increase the behavior.

Using negative reinforcement, the reward is the removal of pressure when the horse performs the behavior, such as the release of leg pressure as soon as the horse moves away from it. Rewarding your horse by giving him something, such as a food treat or petting after a desired action, is positive reinforcement. We need to clearly understand that both procedures work effectively, when applied correctly, to increase a behavior, but positive reinforcement is less intrusive than negative reinforcement because the animal works to get something of value rather than to escape or reduce something aversive.

#### What is Applied Behavior Analysis?

Applied behavior analysis (ABA) involves what has been described above. ABA is a branch of psychology that analyzes, and considers how to change, behavior. The process of analysis involves accurately describing behavior in context consider-



Positive reinforcement can assist in training horses to stand while tied up, a common training issue.

ing the environment and other contributing factors such as what is reinforcing the behavior, and planning to alter the environment or the consequences in order to change the behavior.

#### Labels versus behavioral descriptions - important differences

ABA is concerned with observable behavior. Our observations of our horses' behavior are, however, too often clouded with our emotions. We may label the horse or the behavior - such as naughty, domi-

nant, and 'psycho' - which leaves us none the wiser as to what behavior is being displayed and the circumstances under which it occurs (context).

Instead of labeling, we need to clearly *describe* the actual behavior - what is the horse doing? This is the first step of the analysis process. Next we consider under what circumstances the behavior is being done. What conditions trigger or signal the behavior in the animal, and what consequences reinforce it? From here we can consider a plan for behavioral change.

#### Examples of labeling:

- Horse can't be caught
- Horse is dominant, unfriendly, or defiant

#### Examples of a behavioral description:

- Horse gallops off (behavior) when owner tries to catch him (context)
- Horse backs away from (behavior) an approaching owner with halter (context); horse then turns around and bucks before galloping away (behavior)

Notice how with labeling we describe vaguely what we think the horse IS rather than what the horse actually DOES.<sup>1</sup> With behavioral descriptions we are given a clear picture of what the horse is doing and thus are able to consider what we can do about the behavior because it is clearly described in context.

#### Putting It All Together

Once you have clearly described the horse's behavior that you would like to change, think about how you can redesign the environment to make the desired behavior easier and more rewarding than the undesired behavior. Remember that positive reinforcement is the addition of a consequence that increases the likelihood

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This horse is relaxed and easy to handle regardless of the environment, having been positively reinforced (rewarded) for his behavior.

of a behavior. If what happens after a certain behavior is 'food is given', then your horse will more than likely repeat the behavior, even more willingly.

With the halter example above, we might try approaching the horse without the halter and see what happens. We might add in a reward if the horse lets us approach him. We might stroke him and leave the paddock and gradually introduce the halter once he allows us to stroke him without moving away. This is a sustainable and ethical approach to training that is based on the principle of positive reinforcement that states a behavior is more likely to be repeated in a similar situation if it is immediately reinforced.<sup>2</sup>

The principle of positive reinforcement can be used to sharpen and fine tune everyday behaviors - such as hoof cleaning, head lowering for grooming, leading, and more - in a very short time, using very short sessions. Remember you must reinforce immediately after the behavior.

Once desired behaviors are established, you may wish to stop food reinforcement; however if you wish to maintain this behavior over time, you may need to occasionally reinforce (reward with food) the horse for desired behaviors.

Applied behavior analysis is not a fad or a gimmick, but a sound, scientific approach to solving behavior problems.<sup>1</sup> We have much to gain from ABA in developing our skill and ability as ethical trainers, while the gain for our horses is a welcome change from inconsiderate and intrusive training methods. 

To read more about applied behavior analysis and positive, ethical behavior change see Dr. Friedman's website at [www.behaviorworks.org](http://www.behaviorworks.org).

References:

1. Friedman, S.G. & Haug, L. (2010). From parrots to pigs to pythons: Principles and procedures of learning. In V.V. Tynes (Ed.), *Behavior of*

*Exotic Pets* (pp. 191-205). Ames, IA, Wiley-Blackwell.

2. Martin, G. & Pear, J. (2007). *Behavior Modification: What It Is and How to Do It* (Eighth Edition). Upper Saddle River, NJ: Pearson Prentice Hall

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## Announcement



### Update for *Atticus* the Wild Stallion from Deadman Valley, British Columbia, Canada

*Atticus* has now been tamed and gentled and his new owner that adopted him from CritterAid.org is able to handle him and will eventually ride him soon I am told. He was one of the fortunate ones from his herd that was not taken to auction after the roundup of this so called band of *unwanted and feral horses* this past winter. Not as fortunate were the others that he roamed free on the land with as they were ultimately taken to the auction where we are pretty certain, all sold off to the meat buyer.

I was inspired to host a children's writing competition this year although not certain what the subject would be until I learned about *Atticus ~ The Wild Stallion* from Deadman Valley, B.C., Canada. Although there is something very mystical and fascinating to many people when they hear about wild stallions and their herds roaming free, this like many others that have been rounded up, does not have the fairy tale story ending where the stallion remains free forever to roam the plains with his herd. This stallion since being captured was given the name *Atticus* and you will understand the strong sense of morality and justice that comes with the name *Atticus* if you've read the book or seen the film, *To Kill A Mockingbird*. He has been called *Atticus* because he was a horse that so deserved to be saved from slaughter and as a fitting start to the rescue of other wild horses, from slaughter also. He was handed over to Theresa Nolet, an associate with CritterAid and they were also in fact, handed over several more wild horses during this time spared from slaughter, from our Ministry.

Voice For The Horse will be hosting our first Annual Children's Writing Competition ~ Subject *Wild Horses* this fall and we invite you to join up with us in our pre-launch stage starting June 1, 2011. We are taking the extra time to launch so we are able to gather more information about wild horses across North America and to also network this important subject. The competition will officially start for Oct 1, 2011 through to Dec 31, 2011. If you are interested in finding out more about the competition and / or are interested in the opportunity to sponsor a child who submits an essay, Voice For The Horse invites you to visit our web site at [www.voiceforthehorse.com](http://www.voiceforthehorse.com) for more details.

Yvonne Allen ~  
Executive Director of Voice For The Horse Consulting Canada