

Understanding Basic Horse Training Techniques

Introduction

Many horse owners are content owning a pleasure horse that can carry them at a leisurely pace along a trail. Others want a horse that can perform successfully in competitive events. For a horse to be successful in either job, it must be able to learn specific tasks. Most of these tasks are based on natural physiological responses of the horse, but they are performed with an intensity and duration that the horse normally would not use on its own. For example, successful polo ponies must follow a fast-moving ball while running at top speed and make hard turns and stops. All tasks have components of natural behaviors that have been highly developed. Teaching horses specific tasks is a fairly simple procedure, but it is a procedure that is often mishandled in spite of good intentions.

How Horses Learn

Horses learn through stimulus-response-reinforcement chains, which we commonly call trial and error. The stimulus-response-reinforcement theory states that a stimulus, or cue, perceived by a subject results in random responses, or reactions, from the subject, and if the subject is reinforced, or rewarded, after a correct response, it will begin to associate a specific cue with a specific response. A reinforcement can be either positive, something that the horse likes and works to receive, or negative, something the horse does not like and works to avoid or eliminate. Either way, reinforcements increase the probability that a specific cue will produce a specific reaction in the horse. The trainer's job is to present understandable cues, know when the horse has made the correct response, and reinforce the response in the correct way at the right time.

Cue Presentation

Horses use all of their senses to discriminate cues. They are adept at discriminating minute cues and discriminating among many pairs of varying cues. Horses also are skilled at generalization, which is detecting similarity between stimuli and giving the same response to very similar stimuli. And evidence shows that some horses can categorize stimuli into simple groups; for example, some can differentiate between an outlined pattern with an open center and a filled-in pattern. However, horses may not be able to easily transfer a previously learned stimuli to a new task. When teaching your horse a new maneuver, begin with a simple, obvious cue that makes use of the horse's natural behavior and balance. For example, when teaching a young horse to turn to the right, a natural cue combination would be to put weight in your right stirrup and move your right hand out to the right, providing a leading rein, which allows the horse's head and neck to turn right. The horse will instinctively step to the right to keep your weight balanced comfortably on its back and to follow its head and neck. While it is possible to teach the horse to turn right when you touch its left ear, this cue is not natural and will not lead the horse to the desired response easily. Using more natural cues will make training easier and more enjoyable for both the horse and the handler.

Cues used in animal training should be consistent and specific. Once you have decided that a specific cue will be used to ask for a certain action, don't vary the cue until the horse learns the response. Suppose, in the above example, your horse fails to make the right turn consistently. This does not mean that you should abandon these cues and try a new combination of cues or that you give up and try a left turn. It means that you need to make sure the same cues are

presented each time you ask for a right turn. You can increase the intensity of the cues by weighting your right stirrup more and moving your right hand far out to the side, but do not confuse the horse by suddenly deciding to use a totally different cue combination.

When your horse has mastered a specific cue combination, you can refine or completely change the cues used to get the response. You can do this by repeatedly presenting your new cue to the horse and following it with the previously learned cue. Again, both your new cue and old cue must be specific and consistent. For example, once your horse has learned the simple cues for a right turn, you might want to teach it to respond to a neck rein. You can give the horse the new, less natural cue (the left rein placed against the neck) and follow this with the old cue (weight the right stirrup and the right leading rein). Repeated pairing of the cues with the new cue followed by the old cue is the most effective way to teach a horse to respond to a new, more subtle cue. Backward pairing of cues, old cue followed by new cue, and simultaneous pairing of cues, new cue and old cue presented at the same time, are very ineffective in teaching new cues.

Small Responses Lead to Major Maneuvers

Once the horse has responded to a cue, the trainer must be able to recognize that the horse has made the correct response. It is important that the horse be rewarded for performing small pieces of the desired response during the initial training process. The process in which the trainer rewards successive approximations to the desired response is known as shaping. Shaping is essential in horse training to teach and refine tasks and to increase the intensity that the horse puts into completing the task. For example, you want your horse to learn to face you when you open the stall. To do this, first reinforce the horse when it cocks its ear toward you when you open the stall. After the horse has grasped this task, wait until the horse cocks its ear and turns its head toward you before you reward it. The next step is to begin rewarding the horse when it also begins to take a step toward you. Keep requiring more steps before the reward until your horse walks to the stall door when you open it. To use shaping to increase the intensity of a task, simply withhold the reward until the horse gives you a little more of the speed, strength, or effort

that you want in the performance. Gradually require more and more of the desired intensity for the horse to receive the reward.

Chaining behaviors is a concept similar to shaping in which several finished responses are performed in a particular sequence called a response chain. All major maneuvers the horse performs are simply a series of responses connected in a response chain. Horses do not learn major maneuvers such as calf roping all at one time. They learn many small responses, such as stand in the box, track the calf, stop, work the rope, that result in a finished roping performance when the responses are connected. Chaining will help a horse perform finished maneuvers confidently and effortlessly. The key is to recognize and reward the small responses that make up a finished maneuver and to successively add more of the responses that make up that maneuver. By shaping individual behaviors then adding each behavior into a chain, you can have a horse performing maneuvers correctly and quickly in relatively few training sessions.

During training sessions, review responses learned in the previous lessons. If the horse is having trouble with an intermediate response in the chain, make sure the horse can perform this response before expecting it to perform the finished maneuver. You cannot expect a young horse to do flying lead changes before it can perform a balanced, collected canter with your weight on its back. The strength, balance, and coordination the horse needs for the movement have not been developed yet. When asking for specific responses from the horse, be aware of your horsemanship. Sometimes horses cannot make the correct response because the rider lacks the balance and coordination needed to help the horse through the maneuver. If the horse is not performing a response correctly, always check your horsemanship to ensure that you are not accidentally causing the problem.

Reinforcements Make Learning Happen

Reinforcements are additional stimuli that come after a stimulus-response episode that let the horse know it has made the correct response. Reinforcers can be stimuli the horse innately understands, such as food or electric shock, or can be stimuli that the horse must learn to associate with an innate reinforcer, such as a pat on the neck or a vocal reprimand. Natural reinforcements, or primary reinforcements, are

generally powerful incentives for the horse to perform specific behaviors, but often are difficult to apply. Most trainers use many learned reinforcers, or secondary reinforcers, in their training instead of natural reinforcers. Teaching a horse learned reinforcers often is accomplished through normal human interaction with the horse. For instance, when a trainer catches and holds a young foal, he waits until the foal quits struggling then praises and pets it (the learned reinforcers) and releases it to rejoin its dam (the natural reinforcer). Repeatedly applying the learned reinforcer followed by the natural reinforcer (new stimulus followed by old stimulus) teaches the horse to associate the learned reinforcer with a good or bad state. Eventually, the horse responds to the learned reinforcer as it would to the innate reinforced state. In the popular clicker and target training methods, the horse learns that the clicker or target is a reinforcer and then the trainer uses these during training. Horses readily learn secondary reinforcers and use them while learning new tasks, but the trainer should pair the secondary reinforcer with the natural reinforcer periodically to maintain the reinforcing properties of the secondary reinforcer.

Reinforcements also can be categorized broadly as positive or negative (aversive) stimuli. Positive reinforcements are stimuli that are rewarding to the horse. Horses work to obtain positive reinforcements, such as food treats (natural) or pats on the neck (learned). Negative reinforcements are aversive stimuli the horse works to remove. Examples of common negative reinforcers are spurs (natural) and vocal reprimands (learned). Negative reinforcers can be delivered in two ways, escape and avoidance. Escape is when the negative reinforcer is applied until the correct response is given. For example, applying a spur until the horse makes the correct response of moving away from the spur is escape conditioning. Round pen training, in which the horse is moved around the pen until it responds correctly to the trainer, is a popular training technique that uses escape conditioning.

The second delivery technique, avoidance, gives the horse a chance to prevent the negative reinforcer altogether by giving the correct response. For example, the horse is given a warning cue, such as leg pressure, and when the horse delivers the correct response of moving away it avoids application of the spur.

Giving the horse a chance to respond correctly is the more common delivery method of negative reinforcement in horse training. Avoidance conditioning usually results in a horse that responds to training with less anxiety and resentment than one that is trained with only escape conditioning. Negative reinforcement probably is used to a greater extent than positive reinforcement in most riding situations because it is applied easily. For example, releasing of bit pressure and avoiding a spur or the tapping of a whip are negative reinforcers that trainers can apply easily and immediately. As long as they are applied correctly, both positive and negative reinforcers should help the horse learn. Successful trainers tailor reinforcements to individual horses, realizing that some horses work better with positive reinforcement and others with negative. Good trainers also use both positive and negative reinforcers and often may use both to reward a correct response. For example, they may release bit pressure while verbally praising the horse.

Reinforcements connect a specific stimulus to a certain response. Correct timing of reinforcements is essential to successful training. To make a good association, the stimulus, response, and reinforcement must follow each other closely in time. All reinforcements should be given immediately after the horse has made the desired response. The horse cannot associate a response it made five minutes earlier with the pat on the neck that it is getting now. Likewise, if you are using negative reinforcement, you must remove the aversive situation, such as your spur in the horse's side, immediately after it gives you the desired response. Reinforcement depends on the horse's making the correct response. Presenting reinforcements in the absence of any appropriate response from the horse reduces their effectiveness. Decide what the correct response is and reinforce the horse's behavior only when you get that response. Remember that a response does not have to be a finished major maneuver before it can be reinforced. Set standards about what the correct response for the horse is in its particular stage of training.

When you begin teaching a horse a response, the horse will learn more effectively if it is reinforced every time it performs the response. When the horse has learned the response, successful trainers shift to an intermittent schedule of delivering reinforcements. All animals will work harder to obtain a reinforcement if they do not know when the reinforcement will be

delivered. A good comparison in humans is gambling. Since you do not know when you are going to win big money on a slot machine, you keep putting money into it. The slot machine gives you small intermittent rewards that keep your interest focused on winning the jackpot. To use intermittent rewards in horse training, you must be sure that the delivery of reinforcements does not accidentally fall into a pattern. If a pattern develops in either the number or timing of responses before reinforcer delivery, the horse will quickly figure it out and work only when reinforcement is assured. Be careful not to quit reinforcing the horse altogether when using intermittent reinforcement. Responses that are never reinforced weaken. This concept is known as extinction and can be very useful in horse training. Irritating responses, such as pawing when tied, usually weaken over time if they are not reinforced. The horse has not forgotten how to perform the response; it simply stops exhibiting the response because it does not receive reinforcement for it.

Many handlers may inadvertently reinforce the horse for undesirable behaviors, so it is important to recognize undesirable behaviors and potential rewards. For example, a horse that kicks its stall at feeding time is often rewarded by being fed immediately to stop the annoying behavior. A horse that is pawing while tied often is rewarded by attention. Withholding the reward and changing the environment so the horse cannot inadvertently reward itself (the noise from kicking the stall may serve as a learned reinforcer) can lead to extinction of undesirable behaviors.

Other Considerations in Training

When you train a horse for a specific performance event, consider the horse's athletic ability and suitability for that event. It does not matter how well you use the stimulus-response-reinforcement chain if the horse cannot physically perform the task. Keeping your horse well fed, physically fit, and well shod will increase training effectiveness. But all the good feeding and good training in the world cannot make a world champion out of a horse that is unsuitable for an event.

Because training involves physical activity from the horse, avoid drilling the horse until it is exhausted. Too much physical work will quickly teach the horse to dread training sessions. Repeat the stimulus-response-reinforcement sequence enough times for the horse to learn it, but weave the lesson into other activities so the horse is not continuously drilled, which also keeps

the animal more alert mentally and reduces physical fatigue. Horses trained to do a specific task learn more efficiently when training trials are conducted once a week instead of daily. Horses have short attention spans. A two-year-old can concentrate for approximately 10 minutes, and a mature horse may be able to concentrate for about 20 minutes, so give the horse frequent breaks. Train for 3 or 4 minutes then trot the horse around on a loose rein and let it relax. Exercise does not have to be paired with training. You can exercise a horse sufficiently without overwhelming it with training.

Successful trainers realize that a horse is not like a small child or a large dog and they treat it accordingly. A successful trainer is always the dominant member in the human-horse relationship. Because horses are herd animals and innately understand a dominant-subordinate relationship, they will respond willingly and happily to a dominant trainer. Establishing dominance over a horse does not have to be a painful experience for either the horse or the trainer. It is accomplished by recognizing and dealing with dominance challenges immediately and consistently. Dominant horses can threaten and move subordinate horses around without any retaliation, and they do not have to turn and face a subordinate when it approaches. They also are free to rub on subordinates and initiate mutual grooming activities anytime they desire. If you are the dominant member of the horse-human partnership, your horse should never run over or past you, threaten to bite or kick, rub on you uninvited, or fail to turn and face you when you enter the stall. If your horse does any of these, it is challenging your dominance status and you must correct the horse immediately and consistently. A dominant horse never misses an opportunity to remind other horses that it is the boss. As the dominant human, you should do the same. Remember that once you establish a rule, it is forever. Do not let dominance challenges go unanswered or you will slide down the dominance relationship. As the dominant individual, you must also take over certain responsibilities. If the horse is frightened, you must be the voice of calmness. If the horse is confused, you must show it the correct response.

Once the rules have been established, it occasionally is necessary to punish a horse that breaks a rule. Punishment is like negative reinforcement because it uses an aversive stimulus, but it differs from negative reinforcement because it is used to eliminate an undesirable behavior. It is applied

after the undesired behavior has occurred, while negative reinforcement is applied *until* the desired behavior occurs. Apply punishment immediately after the undesirable behavior so the horse associates the punishment with its previous action. This also forces the trainer to think about which response he is punishing. For example, your horse bites you on the arm. If you wait for the pain to lessen, go find an appropriately big stick, catch the horse, and then whack it with the stick, the horse will think it is being punished for letting you catch it. The horse will not be able to associate the whack with biting you 3 minutes earlier.

Similarly, punishment of a response that is partially correct and partially incorrect works to eliminate both the correct and incorrect parts of the response. Use both punishment and negative reinforcement cautiously because aversive stimuli may encourage horses to escape or be aggressive or apathetic. If the aversive stimuli cause the horse to become uncontrollable or to suppress all behavior, the horse has not learned the intended lesson. Beginning with a weak aversive stimulus and gradually increasing to a much stronger stimulus results in the animal enduring a more severe stimulus than was needed to suppress the behavior initially. When using aversive stimuli, make the initial punishment strong enough to suppress the behavior. Be careful when applying a strong aversive stimulus to influence a behavior because it is closely linked to losing control of emotions in many people. Losing your temper with a horse almost never results in a good training experience.

Make sure alternative behavior is available to the horse when you are using aversive stimuli. In negative reinforcement, the alternative behavior should be the desired response. When using punishment, alternative behaviors may be more difficult to identify. If the horse is punished for running over the handler, the obvious alternative to the human (do not run over me again) may not be as obvious to the horse. Trainers can help

horses and reduce punishment by correcting the horse and providing a task that is incompatible with the bad behavior. For example, your young horse gets excited at a horse show and runs over you. Give the horse a mild correction, such as a yank on the lead chain, and then give it a familiar task that is incompatible with running over you, such as backing up a few steps. When the horse backs correctly, it should be rewarded. This replaces the unwanted behavior with a more desirable alternative.

Another type of punishment used with humans is a time-out or response cost punishment. In this type of punishment, privileges are removed for misbehavior. A misbehaving child is given a few minutes to sit alone, removing the fun he or she was having. A misbehaving adult is fined for speeding. These punishments work well for humans, but may not have much use in horse training because the horse is limited in its reasoning ability. It is hard to explain to the horse that the reason it is not let out of its stall is because it bucked you off earlier in the day.

Conclusion

Whenever you work around a horse, you are giving it stimuli—intentionally or unintentionally—and your horse is responding to these stimuli. You are training the horse continuously, and the horse is learning continuously. Think about your actions and your horse's reactions at all times, and be consistent in your expectations. For example, if your horse is allowed to grab the sleeve of your heavy winter coat in his teeth without any negative reaction from you, then the horse may assume that it is acceptable behavior to grab your bare arm in the summer. Using stimuli correctly and consistently, recognizing segments of behavior that constitute the desired response, and reinforcing the response immediately are the main components of a successful training program. Combining correct training procedures with a basic understanding of horse behavior and empathy for horses will make training easy and enjoyable for you and your horse.

Training Tips

- Plan your training sessions carefully. Have a goal and a method of reaching that goal before you begin each session. Because horses have off-days, have an alternate training plan available for days when the original plan is not effective in reaching your goal.
- Warm up the horse both mentally and physically before training.
- Give simple, consistent cues and immediate rewards. Horses cannot reason or think abstractly.
- Do not ask the horse to perform maneuvers that it is physically or mentally incapable of handling. But remember that both you and the horse have to get out of your comfort zones to progress.
- Use repetition, which is needed for horses to learn. However, too much repetition during a single training session or during numerous consecutive training sessions is detrimental to learning.
- Use both positive and negative reinforcements in training.
- After the horse has mastered a maneuver, deliver reinforcements intermittently to maintain high response rates.
- Recognize when the horse is trying to make a correct response, and reward small portions of the desired response.
- Stop training sessions while the horse is performing correctly. You may have to return to a previously learned maneuver to end the training session with a positive performance.
- Clearly know the lesson you are trying to teach, and be persistent with that lesson. A few correct steps of a particular maneuver are worth more than many partially correct steps.
- If your horse accidentally gives you more than you asked for, such as a flying lead change rather than a simple lead change, take the gift and reward the horse for it.
- Remember that release of pressure is a powerful reward for a horse.
- Be the dominant member of the horse-human partnership. Learn to recognize and immediately correct challenges to your leadership role. Be the leader when the horse is confused or frightened.
- Find ways to keep the horse's attention on you. Changes in movement, direction, gait, or tempo are easy ways to keep the horse entertained and focused on you. Convince the horse that training is a game that the horse and handler are playing.
- Practice good horse management because it is essential to good training. Healthy, happy horses with correctly fitted tack will give you their best performances.
- Keep in mind that horses will work harder if they respect and like the trainer.
- Horses live in the present. They do not worry about yesterday or the future. If you think you have made a mistake in your training, simply fix it and continue to work.

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